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Vol. CLXV
No. 2153
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THE SPHERE

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The Empire's Illustrated Weekly

London, April 26, 1941

WHAT IS THE POSITION OF SPAIN TO-DAY? GENERAL FRANCO, THE DICTATOR OF SPAIN, WITH ADMIRAL DARLAN OF FRANCE.

The attitude of Spain is, at the present moment, giving rise to much speculation

This picture was taken during the visit of the Spanish Dictator to Montpellier, in France, some little time ago, when he met both Marshal Pétain and Admiral Darlan. At the moment, all sorts of conjectures are being made as to what Spain intends to do in the near future. It is undoubted that the country is in a bad way economically, and that the friendly attitude of both the United States and Great Britain have helped Spain internally ; and it was only recently that a British loan to Spain of two millions sterling was announced. But now there are rumours of fresh German demands on Spain, coupled at the same time, with fresh demands on France. Where these will lead is not (at the moment of writing) known. General Franco, it is generally admitted, has his own country's needs always first in his mind : but others of his Government are distinguished for their pro-Nazi views

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A WAR NEWSLETTER —No. 86

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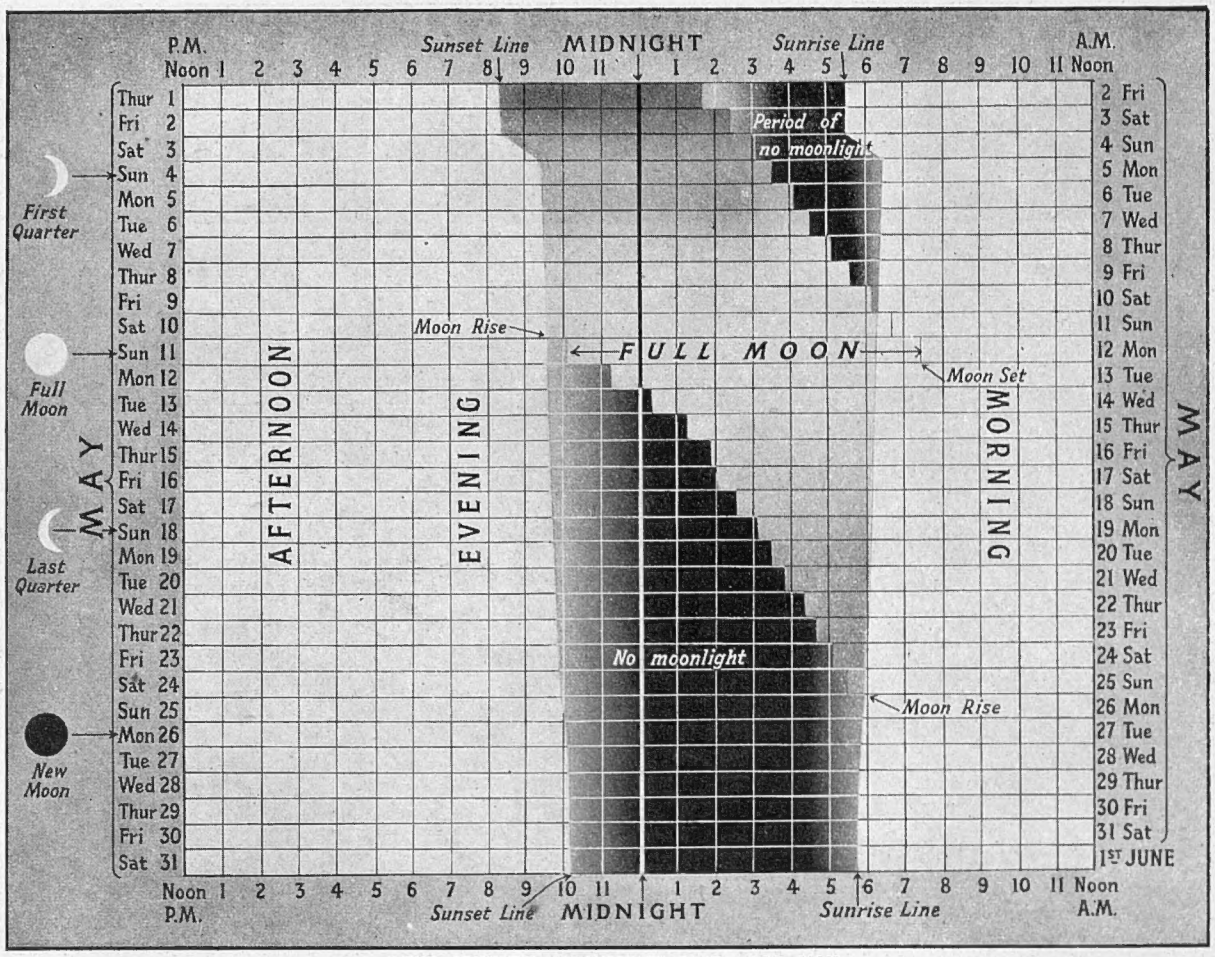
High Stakes and High Conduct.—It is no use to blink the fact that the hour is as critical as any we have known. The stakes are high—nowhere more so than on the borders of Egypt. But they are hardly less high and (in the long view) *as* high in the Battle of the Atlantic, and they are high enough in the beleaguered fortresses of Britain and Greece. High stakes demand high qualities. The time has come to discard, late in the day, a score of unworthy relics and subterfuges of past days, and to face our enemies and our fate with higher courage, worthier dignity and wiser silence. The courage is required of our diplomacy. The neutral world, which has not openly declared for us, is to-day under either the spell or the terror of the Nazis, and no money nor arguments can "buy off" those who are a prey to love or panic or vengeance. To compromise with France, to woo Russia, to curry favour with Spain, to appeal to Japan—all these expedients are as ineffective as half-hearted. If in diplomacy Britain to herself could be but true, would stand for the right, would admit no compromise between what is just and what may be justified, then our name in diplomacy would stand higher and our position in civilisation would be no more isolated than it is. We are *not* isolated. The best part of civilisation is behind us in spirit; the noblest is with us with heart and hand. Nothing but military actions can convert the wobblers, and in that stark fact lies the need for greater dignity and less talk. Worthier dignity and wiser silence are qualities which, in this supreme hour of our fate, are demanded of and, I think, by our own people and their institutions. They have shown their courage. Let them now show their leaders that they do not need and do not ask to be fed daily with the "bread and circuses" of explanations, boasts, warnings, glorifications, confidences and sermons. Let them now make it clear to Government and Press that they wish to cut out what was rotten in our particular form of democracy, and to concentrate on what is sound in it.

The Boomerang of Boasting.—Surely in the past weeks we have had the final lesson in the folly of bragging and triumphing in an all-in struggle. If (as they have) even the Nazi propagandists have reduced the volume of that foolish output, surely the lesson has been severe and of general application. After Ribbentrop's "diplomatic Dunkirk" with Yugoslavia came instantly Yugoslavia's *volte-face*. On the heels of Keren and Matapan came the reverse at Benghazi. Yesterday we were on top; to-day we are rubbing our noses after a shrewd biff. To-morrow it may be Hitler's nose again. And so on, up and down, ding-dong, to the distant end. Meanwhile, we are keeping our end up shrewdly enough. It was ever so, and ever will be, in war. And yet the lesson is *never* remembered. Mr. Churchill learned it only in May 1940, and has not since forgotten it. Both sides began this war (and only now are repenting and reforming) with all the vulgar, blatant, futile self-boosting and boasting of dago prize-fighters before a commercially-staged glove-fight. Even to-day the lesson is not learned. Earlier, the excuse was that there were neutrals to impress, and to woo and win. No excuse remains now for that dangerous and undignified play with a boomerang. There is nothing at all to recommend even the polite and cultured sarcasm and stresses of B.B.C. announcers, or the stings and flings of minor politicians. (As, for example, about the capture of General officers wandering in the desert.) We are at grips with an octopus. We must cut a score of his strangling tentacles. As soon as we sever one, another grips us and throttles us. In the circumstances, it is early days for halloa-ing, and criminal waste of breath to indulge in verbal vitriol. Our strictures can make Nazism no viler than its daily actions make it. Our boasts should be reserved for the day when the last of its tentacles is severed. If this is not fundamental wisdom, I never yet got near to it. The lesson is for all to learn, including those of us who have never ceased to preach it since autumn 1939. I do not often turn for comfort to the poetry of Kipling. It is not the type I care for. But Kipling was a prophet, if not a poet, in my opinion, and he had sound things to say of the folly of vain boasting by an Empire which, he clearly foresaw, would have to fight constantly to the death for what it had won by arms and cemented by wise statesmanship. He begged us not to forget. It is the Old Country which most easily forgets. You do not find the same tendency to boast too soon in the Press and radio of the Great Dominions. Yet, we have proved pretty conclusively, "our people can take it" without these sorry, foolish stimulants to morale, which Press, radio, Government departments and politicians think necessary.

Studying the Balance-sheet.—Robinson Crusoe found it necessary to study his balance-sheet periodically in moments of depression on Juan Fernandez Island. And on our deserted island we must do as he did. As I often say, it is absolutely essential if we are to maintain a right judgment and keep our hearts up and our effort at full blast. The Nazis have made some spectacular gains of territory in the Balkans and in Libya. True, but territory acquired by force carries responsibilities. They are threatening Egypt and perhaps the Suez Canal; they are after our oil supplies in Iraq. True, but they haven't got there, and what they *have* got has cost them dearly. They have gained a number of cities and aerodromes and harbours, but they are using up their aeroplanes as fast as they used them up in the air battles of Britain last August and September, and that pace was found then, and will be found again, to cause awkward pauses. They are sinking our merchant ships very quickly and in great numbers. True, but they cannot supply their various fighting fronts from Norway to Albania and Libya without fearful losses in men, material and supply ships, not to say warships. The tonnage they have lost in merchant shipping alone is approaching 3,000,000 and the *tempo* has increased hugely in the last weeks. They have gained a little petrol, but they are using up far more than they can win, buy or produce. They have now gained domination over Poland, Czechoslovakia, Denmark, Norway, Holland, France, Rumania, Hungary, Bulgaria, Italy, Libya, and most of Yugoslavia. True, but these twelve countries need *policing*, with troops kept at and keyed up to war strength and conditions, and in each country a majority of the people hate them and would turn on them if they could or dared.

Pro and Con.—The Germans gain spectacular victories on land. Their armies still enjoy a legend of invincibility. True; but you observe that, wherever they are met by forces with modern weapons and united hearts and single-minded leadership, they are not, man for man, anything like the equals of their opponents. They are chauffeurs, robots, of little individual guts or initiative divorced from their machines. Their diplomacy "always wins" against ours. Perhaps; but always is a long day. We shall find that either truth, honour and decency and respect for international conventions are not dead but sleeping, or we, too, shall learn henceforth to take the buttons off the diplomatic foils and to begin at last to meet force halfway, in lieu of politely bowing the enemy into every strategic position for successful aggression. Hitler goes on further and further. True, too true. But remember, he *cannot* stop. When he does, he . . . goes. And every mile he goes, meanwhile, lengthens his communications, uses up more and more of his men, weapons, and materials, and increases the ring of hatred round him. But his military machine is enormous, preponderating. True, but the Reich consists of 80 million people. You may put the sincere adherents of Nazism at 1½ hundred millions. Against Nazism are ranged actually "in the field" hundreds of millions of people, and in silent loathing, smouldering but alight, hundreds of millions more. The Nazis show few signs of exhaustion. True, but they are not inexhaustible. Every blow *we* take and deliver is doing that vital thing—our only hope of victory—wearing down their war machine.

American Help.—The President loses no time. No man, not even Mr. Churchill, is to-day more active in the battle for democracy. He is raining shrewd punches. While the arsenal of the Democracies is putting forth a constantly increasing effort (in the face of sorry strikes), the President has taken decisions of far-reaching (and only a few weeks back unimaginable) importance. He has declared that the Red Sea and the Gulf of Aden are no longer closed to American shipping as combat zones, and henceforth American ships will sail to the Canal *via* the Cape, bringing munitions for the Allies. He has seized seventy German, Italian and Danish cargo ships in U.S. ports, and will use them probably for this purpose. The Danish vessels may be paid for one day, but not so the German and Italian, which are forfeit. He has made an agreement with Denmark whereby America will instantly build military, naval and air bases in Greenland, of which Canada will have free use; a splendid bull-point in the Battle of the Atlantic. And finally he has released twenty-five cargo ships more for Lease-and-Lend transportation by ordering the Army to organise road and railway service in lieu of coast-to-coast shipping; and has handed over to Britain a number of invaluable revenue-cutters of considerable tonnage for the U-boat war. All these decisions, announced within a few days, are cheerful evidence that the President is with us up to the neck, and that his head is free, to think ahead. THE OLD STAGER

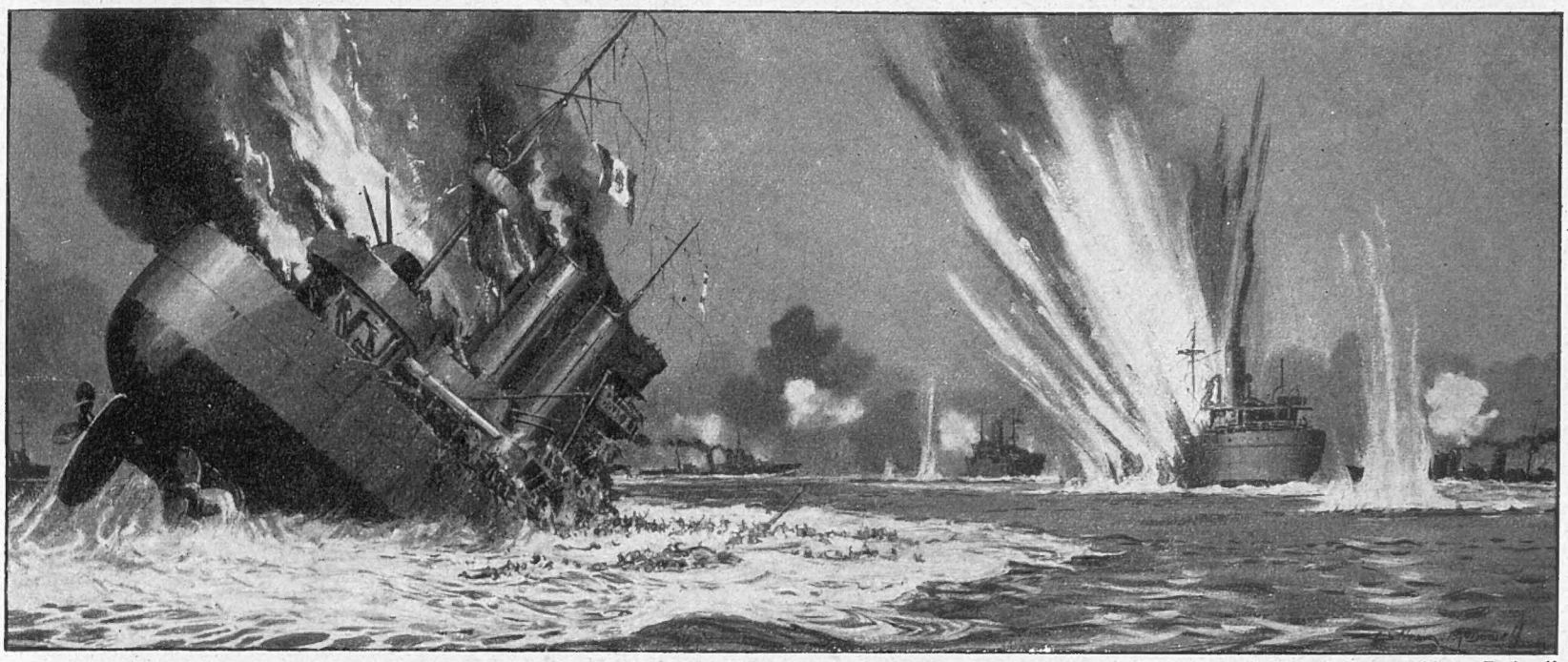


"THE SPHERE" MOONLIGHT CHART FOR MAY

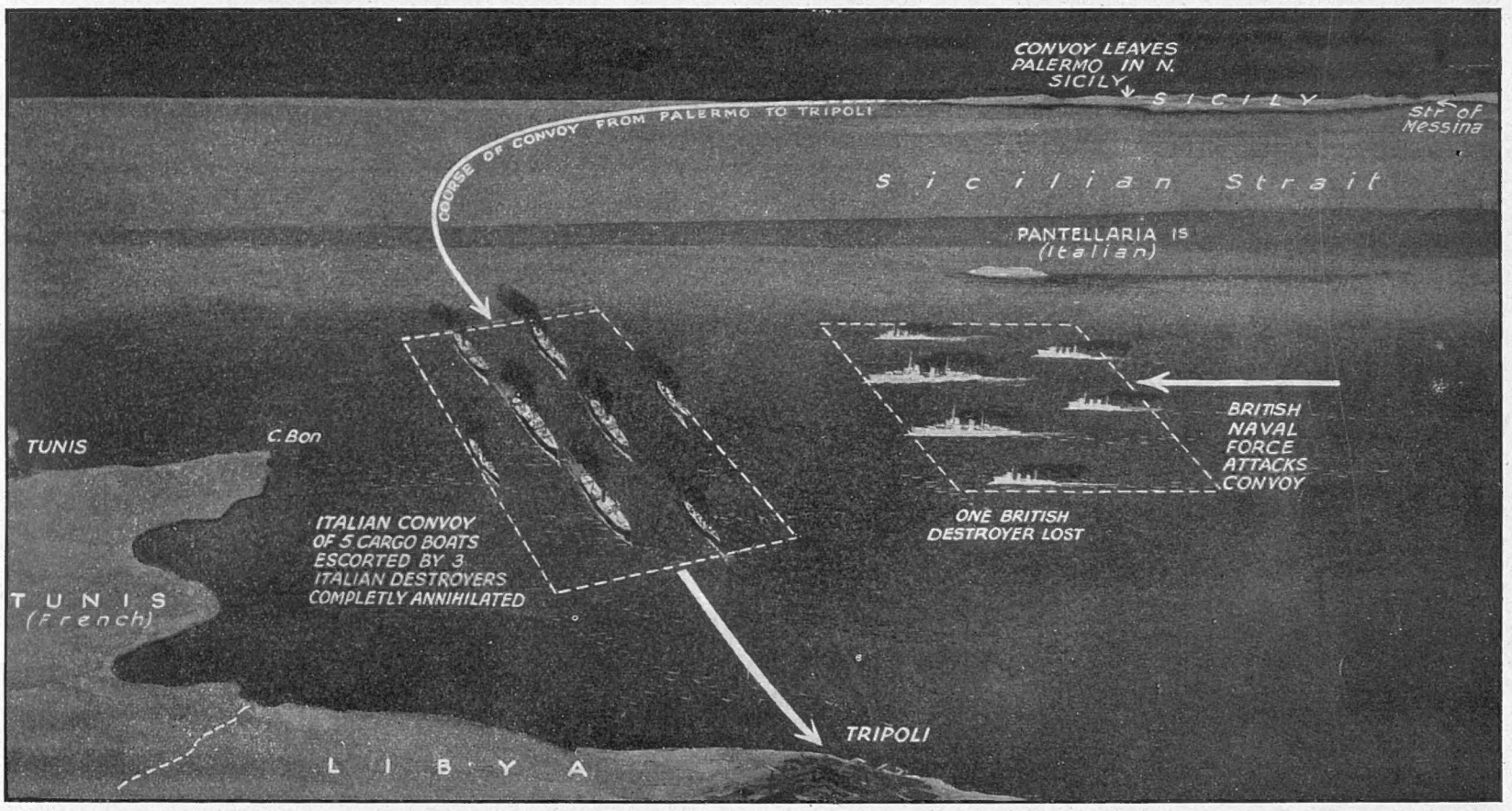
Within the first week of May the first quarter of the new moon makes its appearance, on the night of May 4, when we shall have first experienced the benefits of the added hour of daylight occasioned by the new Summer Time (the clocks are advanced at 2 a.m. on Sunday, May 4). A week later, on the 11th, the moon is at its full and rises at about 10 p.m. and continues to shine throughout the night till sunrise, after which it will still be visible in the sky as it does not set till nearly 7.30 a.m. The last quarter will be visible on the night of the 18th, rising just before 10 p.m. By the end of the month the light evenings will have lengthened to such an extent that the sun will not then be setting till after 10 p.m.

A limited number of these charts will be supplied free of charge on application to the Publisher, "The Sphere," Commonwealth House, 1, New Oxford Street, W.C.1, but 2½d. in stamps must be enclosed with the application

The ANNIHILATION of a GERMAN PANZER CONVOY by the NAVY



THE TOTAL DESTRUCTION OF A NAZI CONVOY, ESCORTED BY ITALIAN WAR VESSELS: An impression of the action—on the left, the Italian destroyer "Luca Tarigo," 1,628 tons, is sinking; immediately to the right of her, in the background, is the British destroyer "Mohawk" (which later was sunk); on the right of the drawing the German ammunition ship of 4,000 tons is exploding before going to the bottom—*Drawing by Wm. MacDowell*

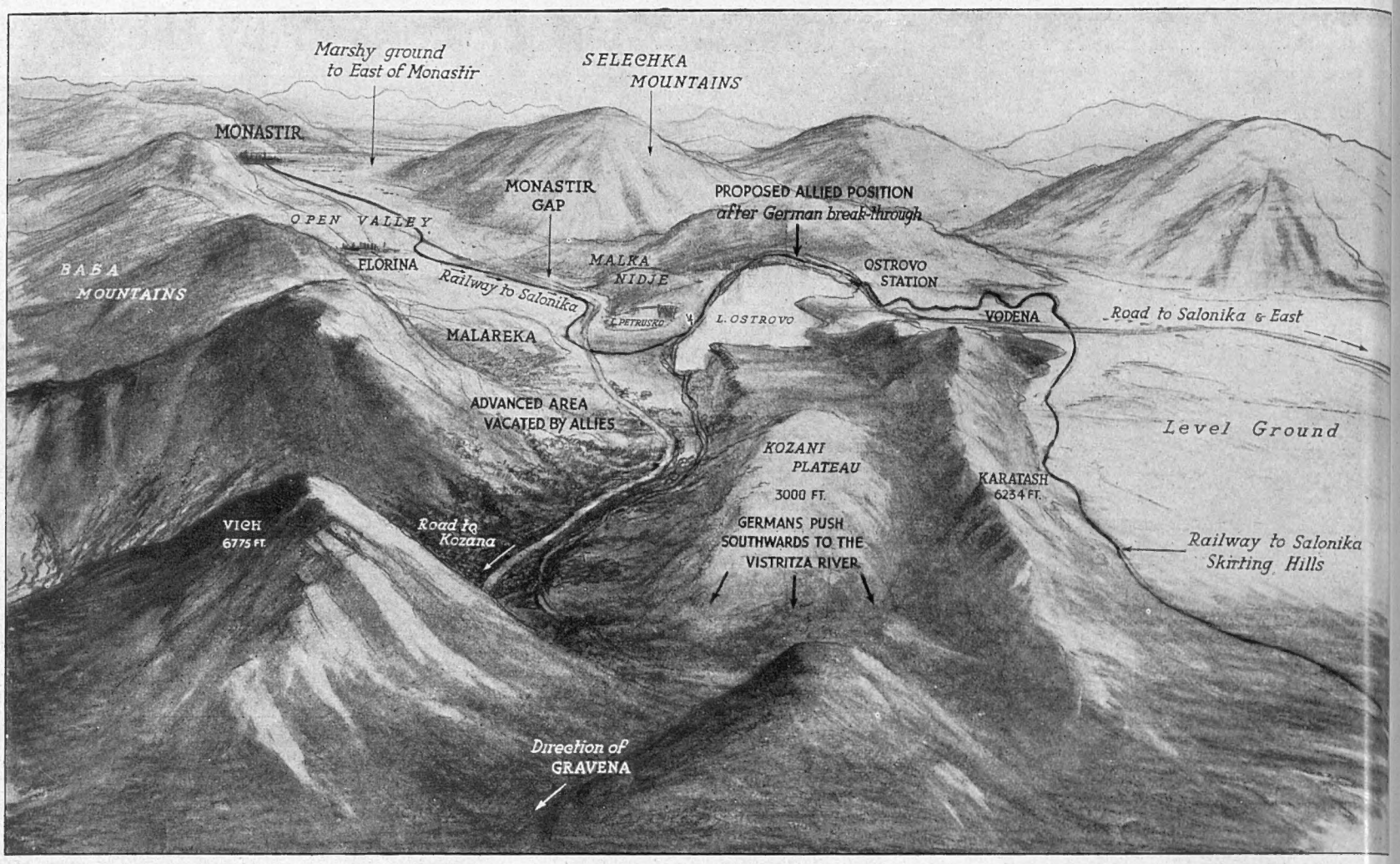


THE SCENE OF THE ACTION: The enemy convoy from Sicily attempts to cross the Narrow Passage by way of Pantellaria to Tripoli, but is intercepted by a British Naval force, with disastrous results for the enemy—*Drawing by E. G. Lambert*

THE AIR OFFICER COMMANDING-IN-CHIEF IN THE MIDDLE EAST HAS HIS OWN AIRCRAFT: Sir Arthur Longmore piloting his own aeroplane when visiting the R.A.F. stations of his far-flung command. He is accompanied by his personal Staff Officer, Squadron-Leader Sir A. R. W. Curtis. Sir Arthur's aeroplane is a Percival "Proctor," a civil type with a top speed of about 180 m.p.h.

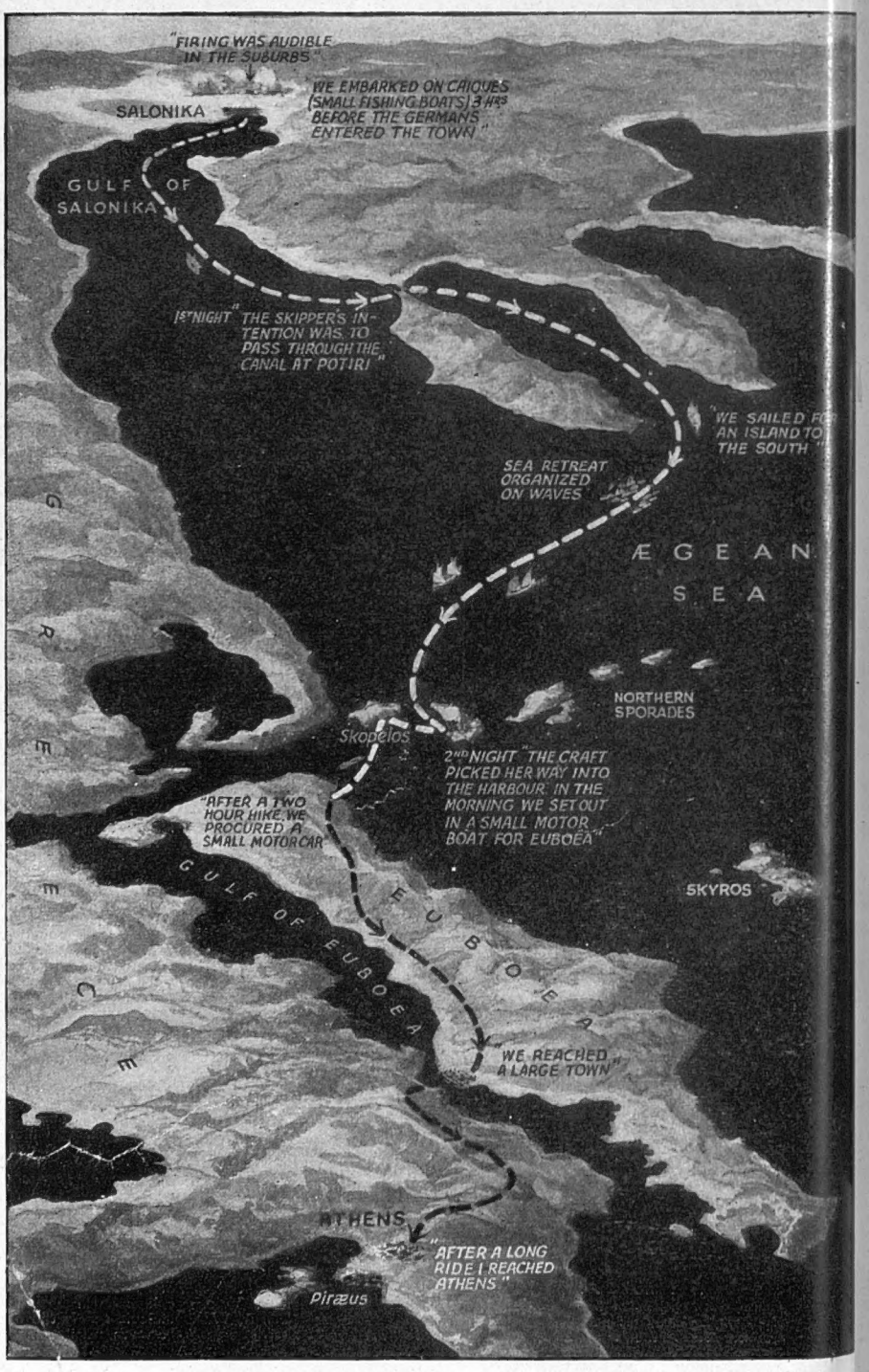
It was not long after the news came through of the German advance along the Libyan coast that the Royal Navy scored one of its big successes against the Nazis off Tripoli. "British naval forces intercepted and annihilated a southbound enemy convoy between Sicily and Tripoli," stated the Admiralty communiqué. "The convoy consisted of five supply ships escorted by three destroyers. Two of the supply ships were vessels of about 5,000 tons, heavily laden with motor transport. These were sunk. Another was an ammunition ship of about 4,000 tons, which blew up with a terrific explosion. The two other ships were vessels of about 3,000 tons, probably transports. These were also blown up. The convoy escort consisted of the Italian destroyer *Luca Tarigo*, 1,628 tons, and two smaller destroyers. All three were sunk." Unfortunately, to achieve this brilliant result, our own destroyer *Mohawk* was hit by enemy torpedoes and sunk. It is obvious that now that the Germans are entrenched in Libya, they will have to maintain themselves there. But the Royal Navy is still in control of the Mediterranean, and the task of reinforcing their armoured columns will become increasingly difficult across the narrow waters between Sicily and the North African coast

A FAMOUS CRUISER RETURNS TO AUSTRALIA: Captain J. A. Collins, of H.M.A.S. *Sydney*, seen aboard his vessel with Press representatives on his arrival in Sydney Harbour recently. In her 16 months' absence from Australia, the *Sydney* sank the crack Italian cruiser *Bartolomeo Colleoni* in the Mediterranean, travelled nearly 80,000 miles in all, withstood 60 heavy enemy bombing attacks, and did not lose a man



THE LINE WHICH MIGHT HAVE BEEN: FROM MONASTIR, THROUGH THE FAMOUS GAP, TO THE HILLS OVERLOOKING THE VARDAR PLAIN: The inability of the Yugoslav forces to hold for any appreciable length of time the German thrust into the S.E. corner of old Serbia must have been a matter of great regret to the Greek and Allied commanders. It prevented the proper establishment of the Monastir-Vardar Valley line, here shown in bird's-eye form as viewed from above Gravena. Monastir, the scene of heavy fighting in the Balkan War of 1912, and again in 1916 during the Great War, is a natural strong point, with its wide marsh area in front to the east. The Baha Mountains continue the line of defence, and there was only the narrow entrance of the Monastir Gap to be specially defended. But such was the rapid pressure during the period of April 16-17-18 that the Allied forces had to retire through the Monastir Gap down the road to Kozana, and from the Kozani plateau, across which the Germans pressed southwards to the Vistritza river. A Tank officer, returning from the Gap, stated that guns and personnel were superior to the Germans. It was merely a question of numbers which forced the retirement, which was carried out with great efficiency, railways and roads operating to the last moment

KING BORIS OF BULGARIA VISITS THE NAZI COMMANDER-IN-CHIEF: King Boris is the man whom Mr. Churchill accused of "treacherous connivance" in the manner in which he assisted in the overrunning of the Balkans. Here he is seen at tea with Field-Marshal Wilhelm List, when the puppet-King visited the German C.-in-C. at his Field Headquarters



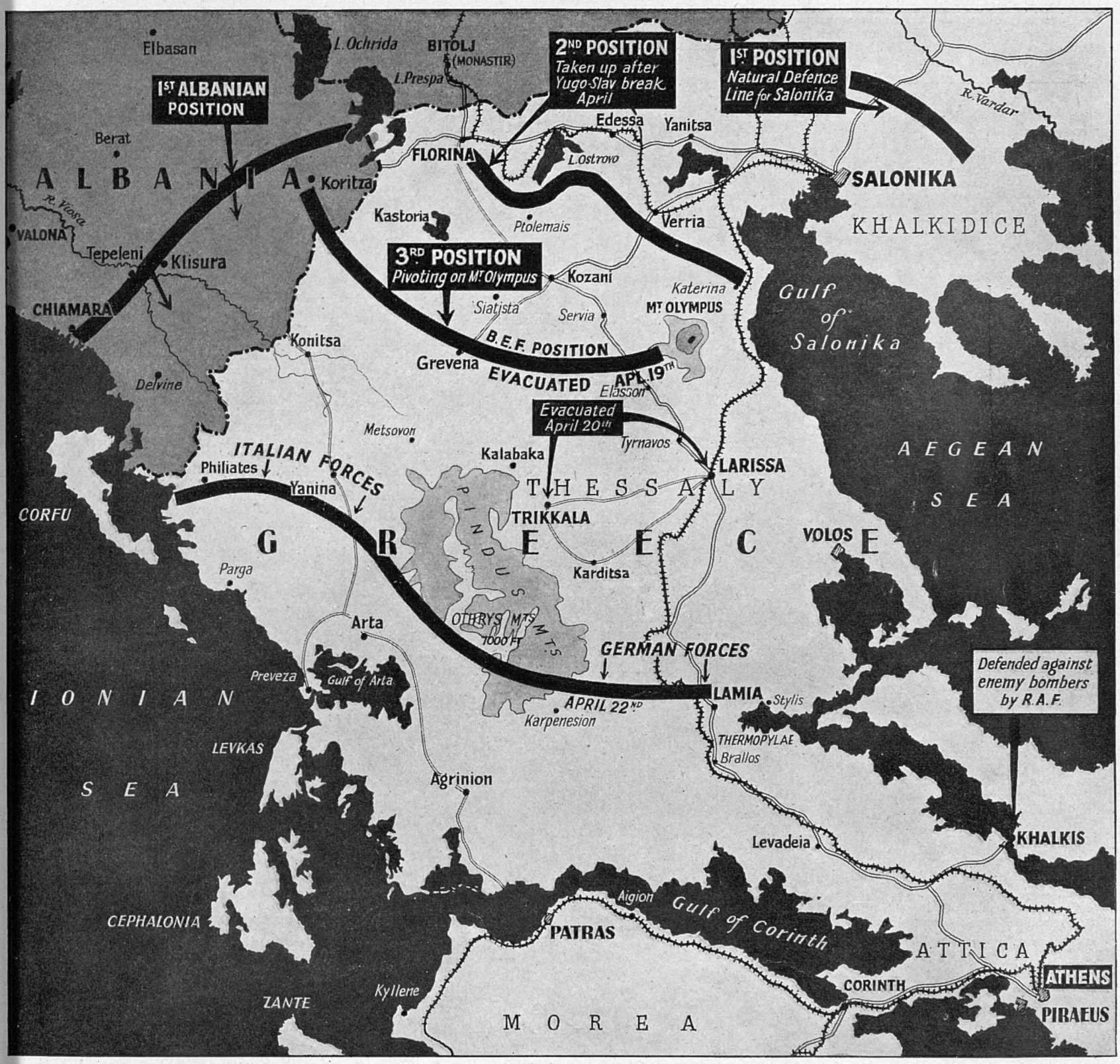
***On right*—A GREEK DUNKIRK, WHEREBY A LARGE PART OF THE GREEK ARMY WAS ABLE TO WITHDRAW FROM MACEDONIA AND THRACE**—*Drawing by E. G. Lambert* Although little is known by the general public in this country concerning the evacuation of the Greeks from Salonika Bay, this was an extraordinary strategic feat whereby most of the army holding the northern frontier against the Germans were able to withdraw. How this was accomplished is shown in Mr. Lambert's drawing, which has been done from the account of one who participated. Caiques were the principal conveyances: from the waterfront at Salonika: these craft went first to Potiri, and then (whilst actually on the water) subsequent stages of the retreat were planned. After two nights at sea the land-locked harbour at Skopelos was reached, where dozens of caiques were gathered, each with its load of soldiers. Then on to the island of Euboea, which was traversed throughout its length. Crossing the Gulf of Euboea, Athens was finally reached at the end of a long ride

THE GERMANS IN GREECE

How the Powerful Thrust through Bulgaria and Albania Was Carried Out

A GERMAN ARMOURED COLUMN PASSING THROUGH A BULGARIAN TOWN ON THE WAY TO THE FRONT: it was only through the treachery of King Boris that this way was opened

FIELD-MARSHAL LIST, GERMAN COMMANDER-IN-CHIEF IN THE BALKANS, TALKS WITH A "BULGARIAN STAFF OFFICER." The Bulgarian Government and staff have, apparently, collaborated throughout with the Germans, as Mr. Churchill definitely made clear in a recent speech



THE HEAVY FIGHTING IN GREECE: THE SUCCESSIVE WAVES OF RETIREMENT THROUGH MACEDONIA INTO THESSALY AND THE DIFFICULT PLAIN OF LARISSA

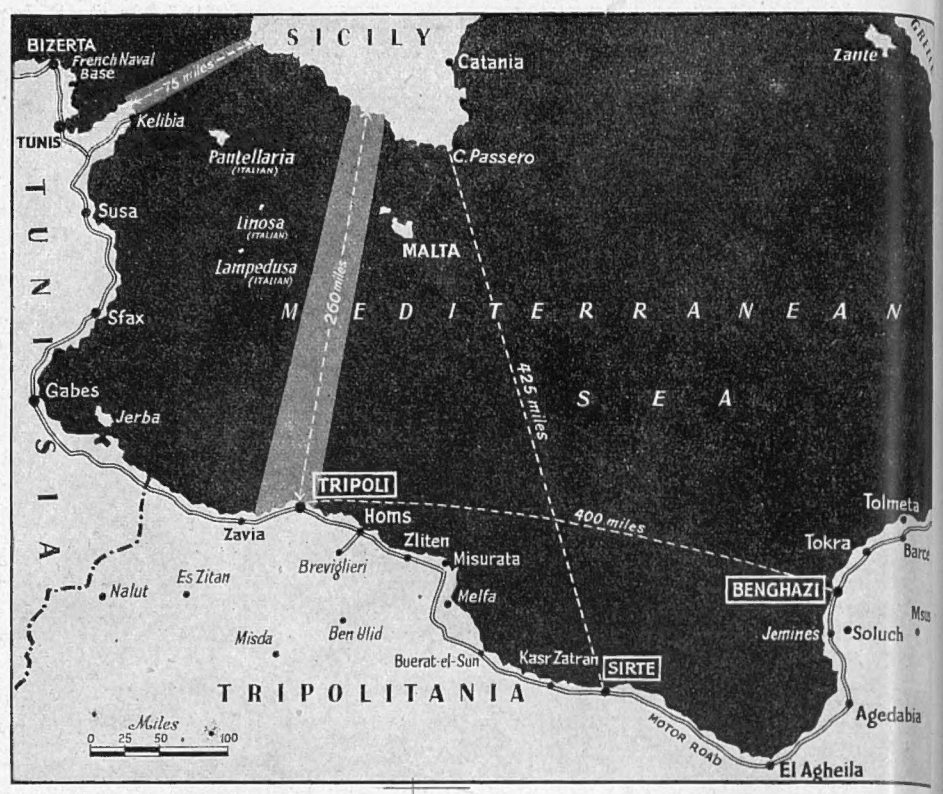
When the Allied position was turned by the penetration of the Vardar Valley, the first Metaxas Line, holding the hills which formed a natural bastion in front of Salonika, had to be abandoned before the Germans entered the port on April 9. A second line had to be occupied as effectively as possible in the short space of time which the rapid advance of the enemy allowed. This extended from Monastir by way of Florina, L. Ostrovo down towards the shore of the Gulf of Salonika. The pressure of the enemy attack was thrown against this line without regard to losses either in tanks or men, and a further retirement had to be made in the direction of Thessaly. The line on April 19 stretched as a bow from Koritza on the Albanian frontier to the famous Mt Olympus, which British Imperial forces were holding against heavy enemy assaults. Many individual actions took place here among precipitous cliff country but the combined Greek and British forces effectively resisted pressure during the further retirement to a new line running from Philiates on the left through the Othrys Mountains towards Lamia. Earthquake-stricken Larissa was evacuated on the 20th, and on Wednesday morning it was announced that the Germans were in occupation of Lamia

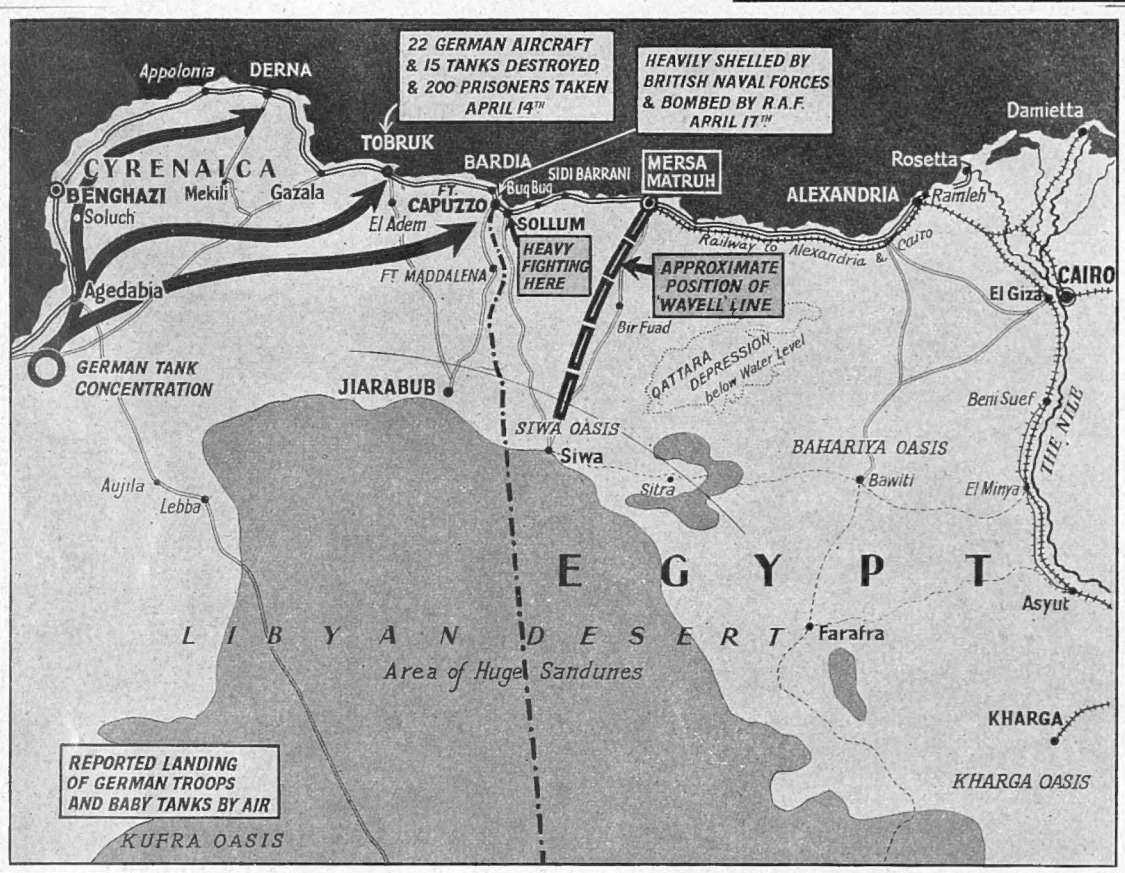
The BATTLE of the TANKS in NORTH AFRICA: An Explanation of the Tactics Employed—By DONALD COWIE

IN light of the growing realisation that properly organised columns of tanks can be well-nigh irresistible, it is interesting to gather and study all the available information about that remarkable German drive from Tripoli to Egypt. Whatever happens in the interim, there are hard lessons to be learnt here. First and most important, of course, is the question, how did the Germans get to Tripoli (or to that El Agheila on the borders of Cyrenaica whence the drive properly started)?

Perhaps recriminations are not only dangerous but also unjust at this stage. The area of responsibility for air reconnaissance and land investigation by disguised intelligence officers (indicated in the diagram on the right) was not a difficult area as such. Our aircraft, ships and spies *should* have been able to inform G.H.Q. of what the Germans were doing. Daily our bombers flew across Benghazi to Tripoli, to Malta, to Sicily, to Naples. Our ships were always in the Sicilian Channel, and our intelligence officers were doubtless well distributed in Arab quarters.

But it might well be that fairly comprehensive information about the German activities was delivered to G.H.Q.—and received with considerable anxiety there. This would have been because G.H.Q. also knew about the impending German drive in the Balkans, and the necessity of sending more and more troops there. But there is no escaping this fact: Headquarters at Cairo could never have believed that the Germans could be capable of organising Italian material for such a desert thrust as they did eventually deliver. In other words, the potentialities of tanks and Germans were still underrated.





THE SITUATION AT TOBRUK AND AT SOLLUM: At the moment of writing, the map reproduced above accurately portrays the present situation. Tobruk is more than holding its own; and Sollum, too, is being held. The main British defensive positions are at Mersa Matruh, where, it is stated, the already existing defences have been strengthened to stem the further advance towards Alexandria and the East

The point is worth insisting upon. Too much has been made of miraculous German feats of tank transportation by air. Why should the Germans have adopted that perilous and unsatisfactory method when (1) Graziani's Tripolitanian Army with all its machines and material was still available for employment; and (2) sea-borne material could be brought across to Africa in almost any bulk via Tunisia and through the coastal waters of that colony to Tripoli?

Probably the Germans did bring a certain number of light tanks (they have so many of these), of motor-cycles and of troops by aircraft from Sicily. But the rest of the material, the oil, water, food, ammunition—and several more tanks, lorries and motor-cycles—was just waiting to be used in Tripoli.

And why did they do it? Perhaps the answer is contained in the Hitlerian character, for the German General Staff, as such, would possibly never have agreed to such a hazardous plan. But Hitler's own scheme had been for a gigantic pincers movement to gain the vital oil of Iraq and Iran, to sever the Suez route, and to deny Alexandria to the Fleet. He was to thrust through Turkey, while the Italians were to move from Libya and Eritrea against Egypt. But the Italians failed miserably to carry out their side of the bargain. Now the Hitlerian character was revealed.

With supreme arrogance, and a fanatic faith in his own acumen and the ability of his hypnotised men, the German leader ranted and stormed, finally to declare: "We shall do it ourselves—and thrust through the Balkans at the same time." Possibly the General Staff demurred, but Hitler sent one of his own right-hand men to Africa, and the job was soon *nearly* done.

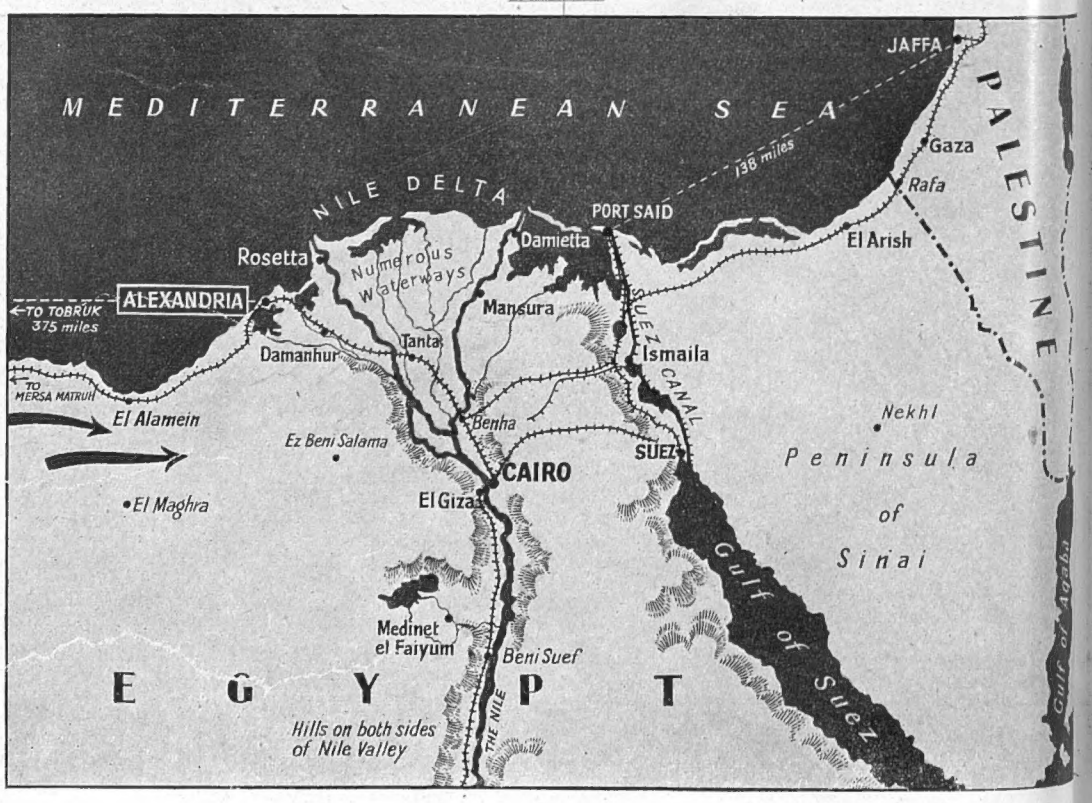
The qualification is necessary, because we hope and believe that Hitler has badly stubbed his toe in this audacious, but fundamentally unsound Libyan campaign. Let us examine further, however, its precise objectives.

Hitler obviously believed that such a stroke would take us completely by surprise, and that the tank columns, as usual taking advantage of their mobility and ability to go anywhere in order to capture headquarters staffs, throw our forces into confusion and simply by-pass our strong points, would soon be on the high road first to Alexandria, second to Cairo, third to Suez, and fourth——

Turkey and our forces in Palestine would be cornered; the oil wells would be taken, as well as Egyptian cotton and many other things that the blockade had pinched particularly tight; it would be a real stalemate at last.

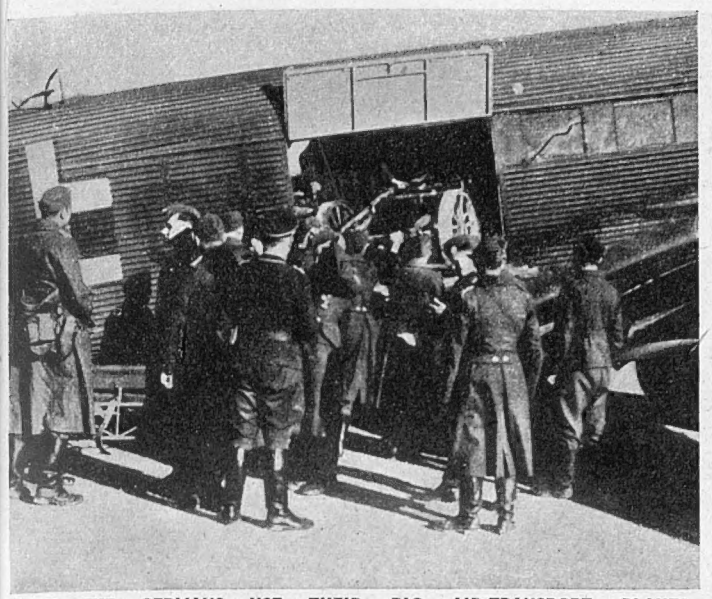
HOW WAS THE ATTACK ON CYRENAICA LAUNCHED

Until more information is forthcoming, the methods by which the Germans were able to make their concentrations in Libya are unknown. Here, however, are some of the possibilities and the distances involved from Sicily to the North African coast

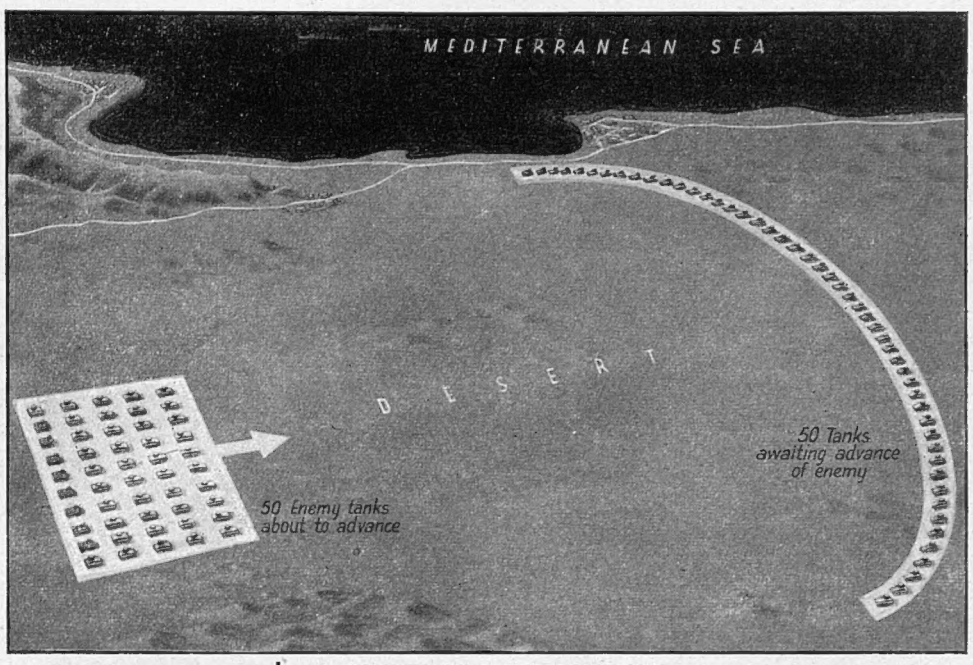


On right—

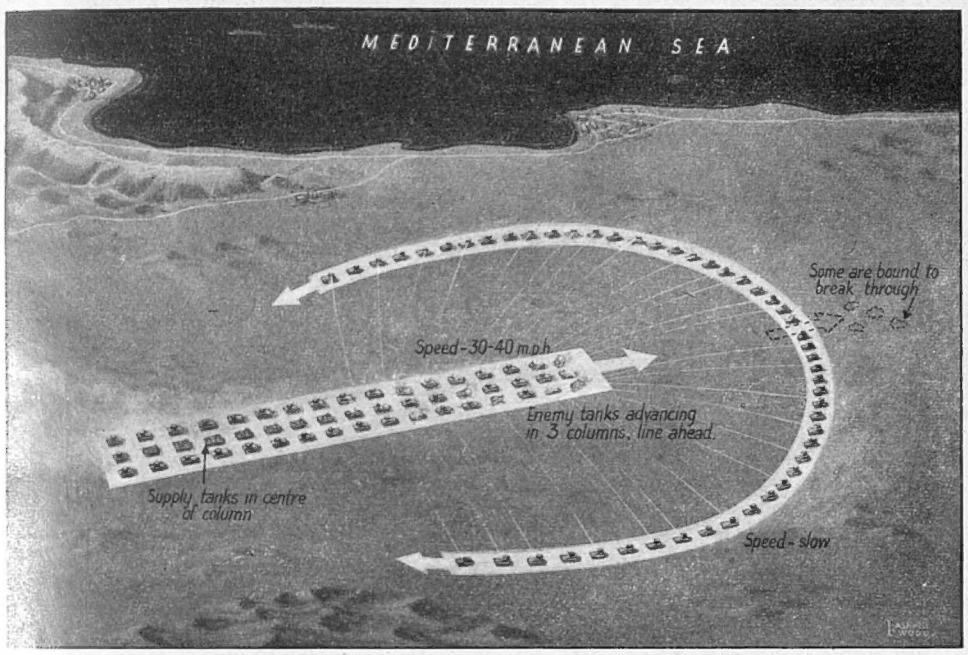
THE ULTIMATE OBJECTIVE OF THE GERMANS: There is very little doubt that the German plan is to advance on to Alexandria, to render that great port untenable for our Mediterranean Fleet. If this succeeds, the Germans will then attempt to press on farther and attempt the capture of Port Said and the Canal zone. It should be noted that there are considerable obstacles to mechanised transport to the south of the coastal zone: these are the wide River Nile and the hills which border it to east and west



HOW THE GERMANS USE THEIR BIG AIR-TRANSPORT PLANES : This picture, which comes by way of the U.S., purports to show field equipment being unloaded from a big German transport plane in Libya



I. A HYPOTHETICAL DESERT SITUATION : An attack by a compact force of enemy tanks against an extended force of defence tanks advancing in line abreast to give battle



AN ALTERNATIVE SITUATION : The enemy tanks advance in a long column at speed, with the defenders curving round to enclose them

"GERMAN TANKS OF THE PANZER DIVISION IN LIBYA" : This, too, is a German photograph, in which figure heavy tanks, transport lorries, and bivouac tents for the German personnel

But, as I say, we hope and believe that the German has at last made a first-class blunder. His North African tanks may go so far; then our tanks will start off again and retrieve all the territory and positions the Germans have taken. As shown elsewhere, this tank warfare is a game of check and counter-check, with the prize to the stronger. We *should* be, before very long, the stronger in North Africa.

Already two flaws in the plan have been demonstrated. The first was the catastrophic destruction of a whole convoy on its way to North Africa from Sicily — Italian destroyer escorts as well. The second was our landing in Iraq, to checkmate German designs in that country. There may be other shocks in store for the enemy. Let us hope so, at any rate.

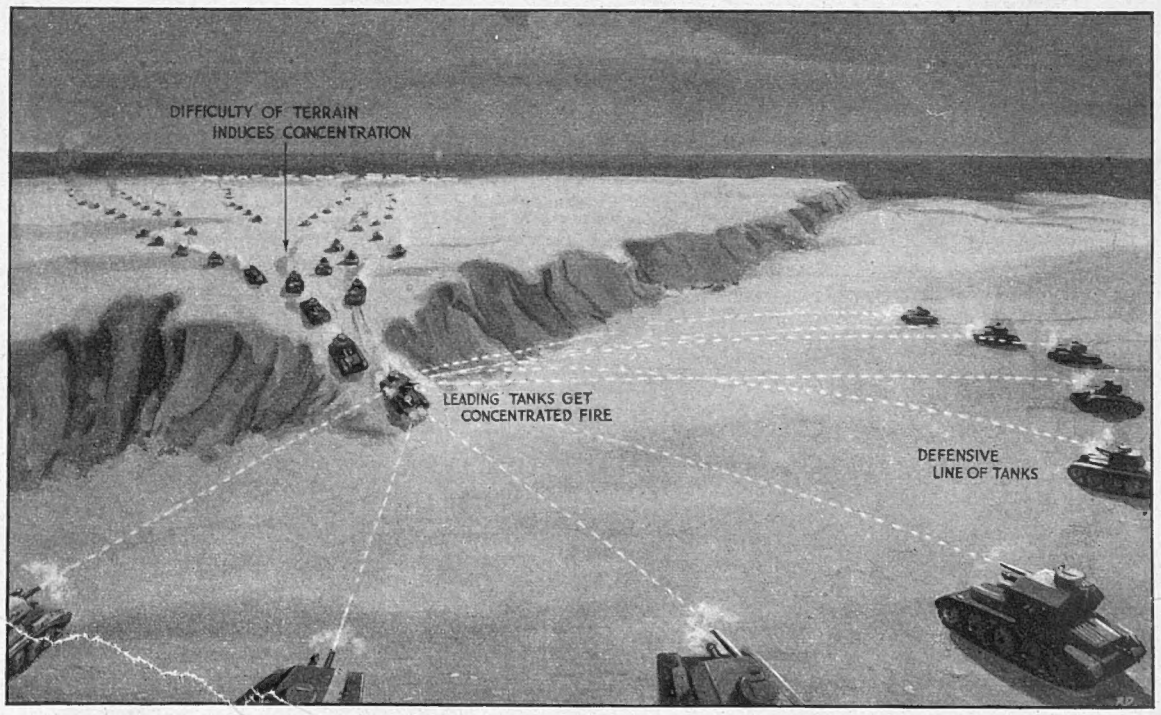
TANK versus TANK

The Role of the Defence

PERHAPS the best way to appreciate the difficulties of tanks on the defensive is by study of a simple diagram, such as that given on this page. Here we have depicted a hypothetical desert situation, in which a column of fifty attacking tanks is opposed by an equal number of defenders. What courses are open to the latter in their vital job?

One, they can spread out in a semi-circular line, or crescent, with the idea of ensuring that there will be no obvious gaps for the attackers to penetrate, and with the ultimate purpose of moving inwards to envelop the column, enfilade it, and finally destroy as many as possible.

But it should be remembered that the attackers would be advancing at high speed, possibly preceded by motor-cyclists and aircraft for spotting the best way through, while the defenders would be either static, or trundling forward slowly. That speed, and that spotting, would almost certainly be bound to carry some of the attackers through.



THE DIFFICULTIES OF THE NORTH AFRICAN TERRAIN TEND TO CAUSE CONCENTRATIONS OF TANKS IN THE MANNER SHOWN : Leading down from the escarpments of Libya, it is likely that the enemy must concentrate on one—or two—spots such as the above, where the roads lead down from the plateau to the plain. In such cases it should be possible for the defenders to bring a heavy volume of fire to bear at the vital point in the manner shown

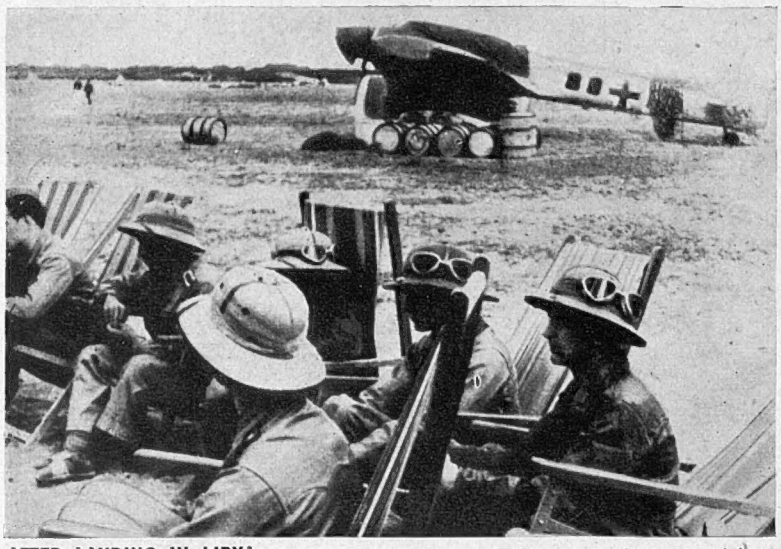
Or, two, the defenders could erect a proper defensive line, in depth, bringing anti-tank guns and fortified points to reinforce their scheme of defence. This, however, would only add to the attackers' advantage of mobility. The attackers might simply refuse to accept the challenge, and, as we did so often against the Italians, seek (and eventually find) a way round. But even if they were foolish, or German, and decided to attack the strong point at all costs, one or two of them would probably blast a way through the line, and, once through, would be able to take it in rear. Just one tank, so well-armoured and mobile, with such heavy armament, can do incredible damage behind the scenes, as has been shown time and time again.

Finally, there is the question of supply. Our commentators keep on saying that sooner or later this or that drive must slow down, that the lines of communication are being extended dangerously, and the like. But the fact is that a properly organised tank thrust has no lines of communication. Tanks themselves can carry fuel, food, ammunition and water. Aircraft can drop supplies anywhere—well behind the defending lines, if necessary. And hitherto tanks have often secured all they wanted from the defenders' own stocks, taken by surprise in the rear.

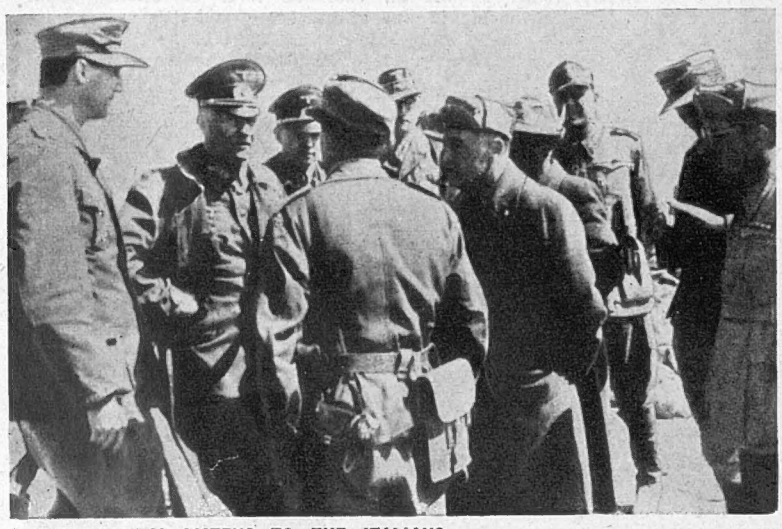
D. C.

THE GERMANS IN LIBYA

New Pictures Circulated for Propaganda purposes by the Enemy



AFTER LANDING IN LIBYA : Nazi airmen, in pith helmets and goggles, wait while a transport plane is unloaded of supplies. The German caption states that these supplies were for Messerschmitt fighters

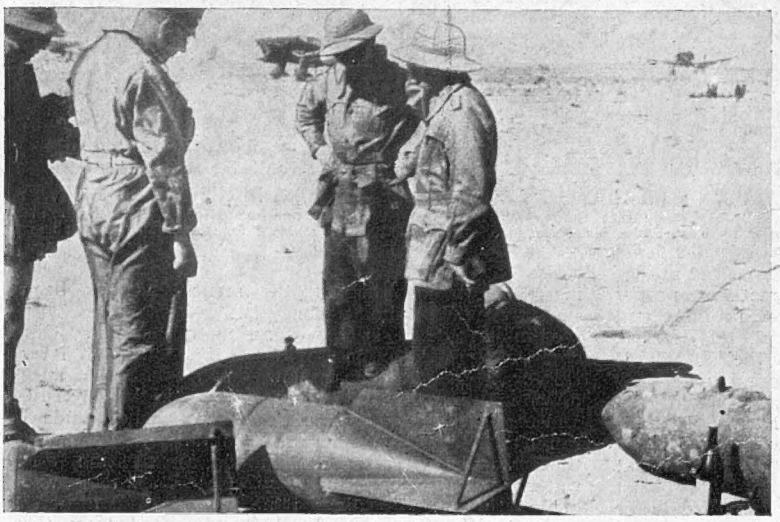


A NAZI GENERAL LISTENS TO THE ITALIANS : The two Allies confer on meeting. The Nazis seem a little free and easy as the Italian commander (next on the right to the man backing on to the camera) unfolds his tale of woe

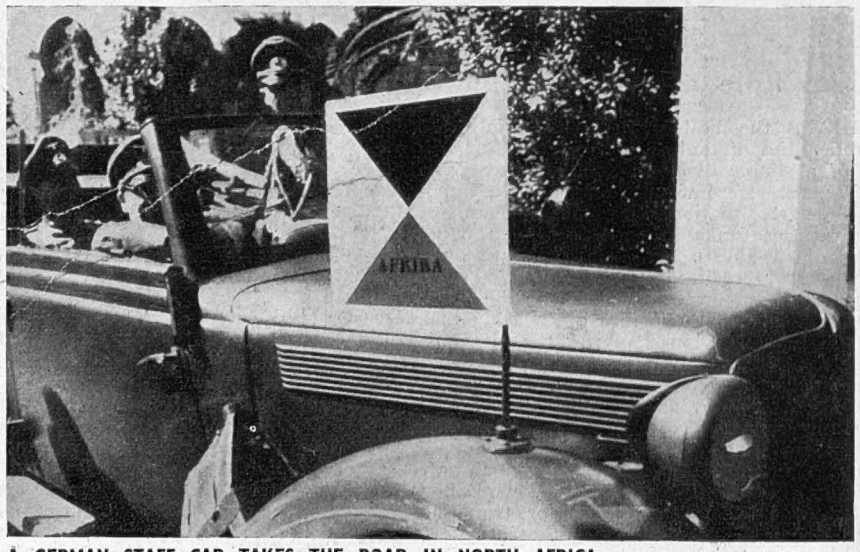
THE COMMANDER'S FAREWELL TO HIS FÜHRER : General Rommel, who is in command in North Africa, says good-bye to Hitler. Behind, carefully posed on the mantel, is a picture of the junior Axis partner, Benito Mussolini

A GERMAN FLYING OFFICER ADDRESSES HIS MEN AFTER THEY HAVE LANDED IN LIBYA

THE GERMANS ARE MAKING USE OF ITALIAN MATERIAL : A mobile water tank used by Germans and Italians alike. The wagon belongs to the Italian *Regia Aeronautica*



"A PRESENT FOR WAVELL" : Nazi planes bombing-up in Libya. Note that the German bombs, unlike the British, do not carry a guiding metal ring around the fins, and can thus not be as effective in precision bombing



A GERMAN STAFF CAR TAKES THE ROAD IN NORTH AFRICA : The standard on the wing of the car announces that the occupants are members of the German "Afrika Korps," as General Rommel's forces are now described in Axis countries

We Are Giving It Back

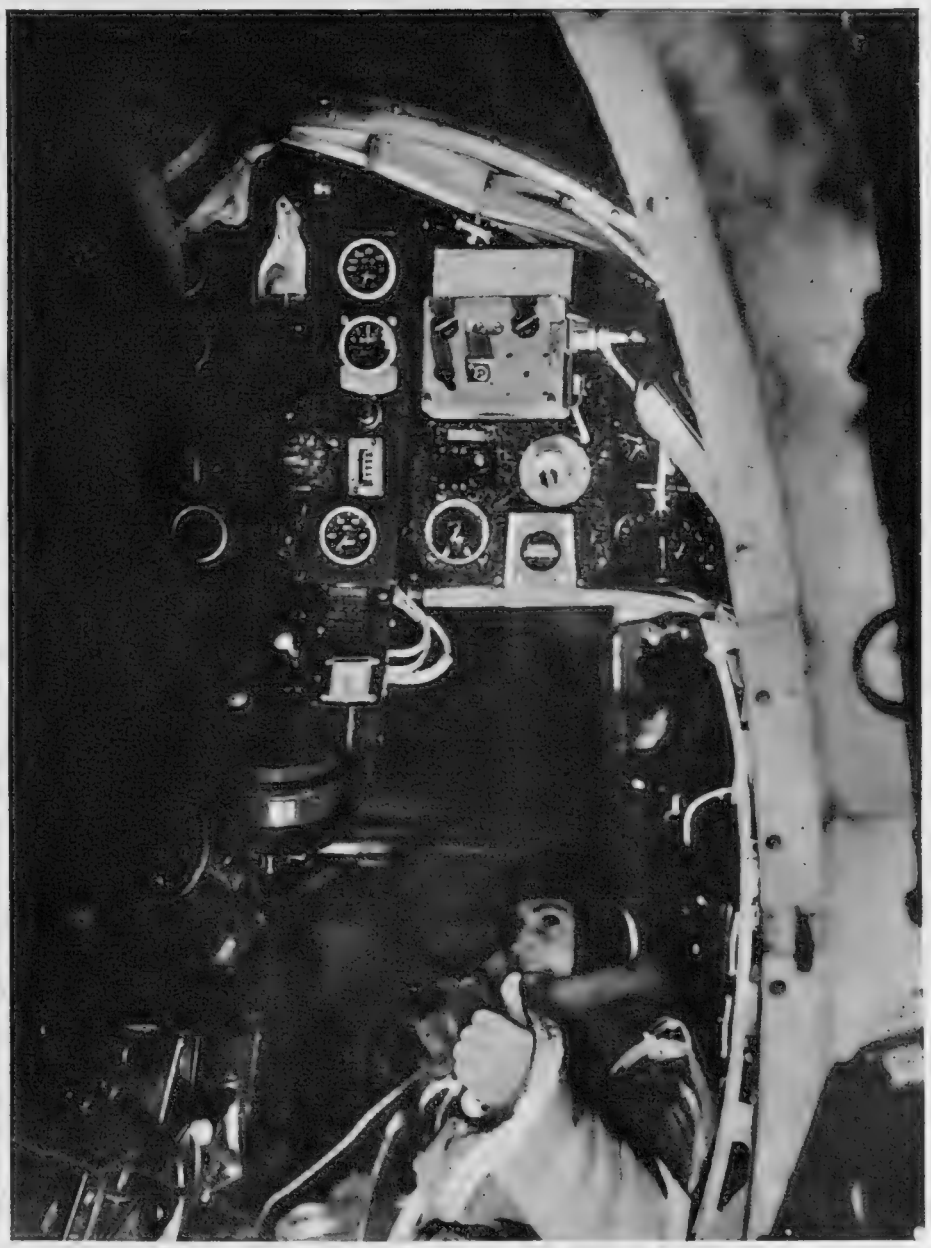
And Our Bombing Attacks on Germany and Berlin are Increasing in Weight, as Mr. Winston Churchill Promised that they Would

THE MEN WHO DIRECT OUR STRATEGY IN THE AIR : A picture taken at a recent session of the Air Council in Whitehall. These three men are responsible for the conduct of the war in the air : they are Captain Harold Balfour (Under-Secretary) ; Sir Archibald Sinclair (Secretary of State for Air and President of the Air Council) ; and Air Chief Marshal Sir Charles Portal (Chief of the Air Staff)

THE MEN WHO DO THE WORK : Bomber crews being interrogated after their return from Berlin : These men actually took part in the very heavy raid on Berlin on the night of April 9, when for nearly three hours a strong force battered its centre. It was this raid which caused the Germans' "Reprisal Raid" on the night of the 16th, when London suffered its heaviest attack for months

ON THE POINT OF LEAVING FOR BERLIN : Final preparations in the late afternoon for an attack on the German capital. Hot coffee has been served out to the crews before the long and cold ride there and back

LIGHT FOR HIDDEN GERMAN TARGETS : A FLARE GOING DOWN THE CHUTE OF THE BOMBER TO LIGHT UP THE CITY



ALL SET FOR THE TAKE-OFF : THE BOMB-AIMER LOOKS UP TO HIS PILOT JUST BEFORE THE START OF THE TRIP TO BERLIN

"We will give it to them back" was the promise made to the bombed civilians of Bristol by the Prime Minister during a recent visit. That promise is already being redeemed by the Royal Air Force. Nightly, whenever weather conditions permit, the heavy bombers set off to attack military objectives in Germany—and Berlin itself. More and bigger bombers of the R.A.F., carrying larger and more powerful bombs, are striking harder each week, hitting the enemy where it hurts most in his own country. Each new raid on Britain sends our own air-crews out determined to "give it to them back" —with interest

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PUTTING THEIR CAPES OVER THEIR HEADS AS PROTECTION FROM THE ICY BLASTS, GREEK SOLDIERS MOVE UP TO THE FRONT IN ALBANIA
The weather this winter in the Albanian hills has been severe, and it has lasted unduly long into spring. Snow is even now lying on the hills in these regions, from which the Greeks have retired during the past few weeks to link up with British forces on their right. Note in this picture that the Greek soldiers are now wearing steel helmets of the British type, instead of their former "pudding bowls"

The CAMPAIGN in GREECE

The Severe and Wintry Conditions under which the Gallant Greek Army Fought the Italians on the Albanian Front

HOW THE GREEKS FOUGHT THEIR CAMPAIGN IN ALBANIA: A scene during the sanguinary encounters in the Klisura region
—Drawn by A. Egerton Cooper (from photographic material)

All during February and March the crack divisions of the Greek Army had been steadily attacking the Italian positions leading to Berat, the chief advanced enemy centre of supply. They pushed their guns and anti-tank weapons through woodland and mountain-forest cover in a way which was gradually seizing point after point and which would have eventually driven the Italians back to Valona and Berat and ultimate surrender. Now, under the pressure of the German mechanised forces, the valiant Greeks have been forced to withdraw from their hard-gotten gains in Albania and retire—with the British on their right—towards the south

CAVALRY WERE USED BY OUR GREEK ALLIES IN ALBANIA: Here a troop are seen splashing through an icy and quick-flowing river. The Greeks proved themselves hardy warriors in their campaign against the Italians

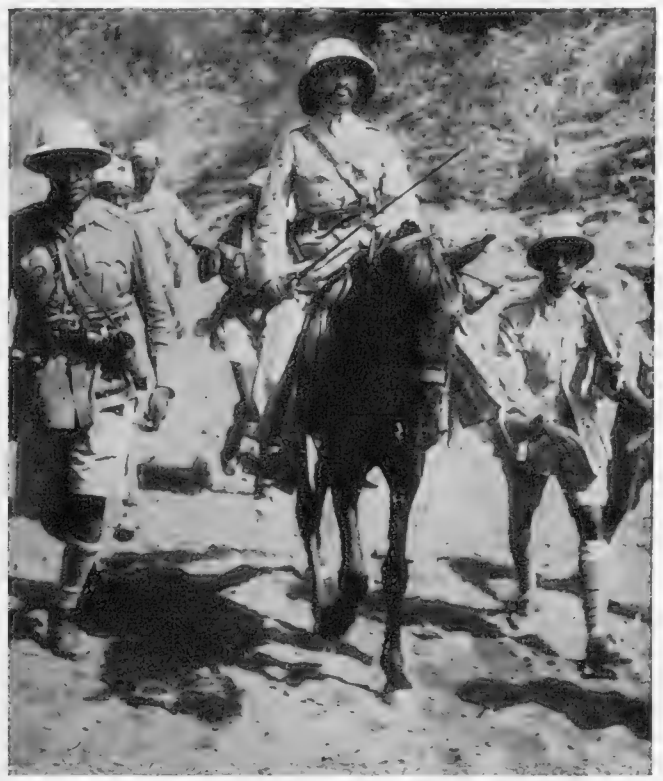
THE TYPE OF ITALIAN SOLDIERS WHO WERE CAPTURED BY THE THOUSAND BY THE GREEKS IN ALBANIA. Unshaven and weary, these prisoners were being taken off for a good, hearty meal

THE CAMPAIGN IN EAST AFRICA

How the Fort at Dologorodoc was Reprovisioned from the Air: and the Model in the Sand for the Pilots Before the Battle at Keren

Drawing by E. G. Lambert

AN INCIDENT DURING THE CAPTURE OF KEREN—British aircraft dropping supplies to the British Forces in the Fort at Dologorodoc: During the battle for the great stronghold of Keren, word came through that certain units of British soldiers who were holding the fort at Dologorodoc needed food. This was one of the key positions at Keren. The bombers loaded up with tinned rations and, under fierce fire from Italian batteries, dropped the food within a few yards of where it had been arranged. There were no parachute containers handy, so the aircraft came down to within fifty feet from the ground in order to prevent the tins from bursting on impact. Some tins were carried in the bomb-racks and others inside the aircraft



THE EMPEROR IS BACK IN HIS OWN COUNTRY: Shortly it is expected that Haile Selassie will re-enter his capital of Addis Ababa. When this picture was taken he was 200 miles deep into Abyssinia, guarded by his own troops and a few British officers. The trek to this point took two weeks and during the journey 200 camels died

WHAT THE SOUTH AFRICAN AIR FORCE HAVE DONE: The South African pilots have done splendid work, both in Abyssinia and Eritrea. Here are some of the Italian pilots they have shot down and taken prisoner. They are the crews from three Caproni bombers which were brought down near Dif by Captain Cross, D.F.C. The Italian airmen are being interrogated by Intelligence officers of the South African Air Force (on right)

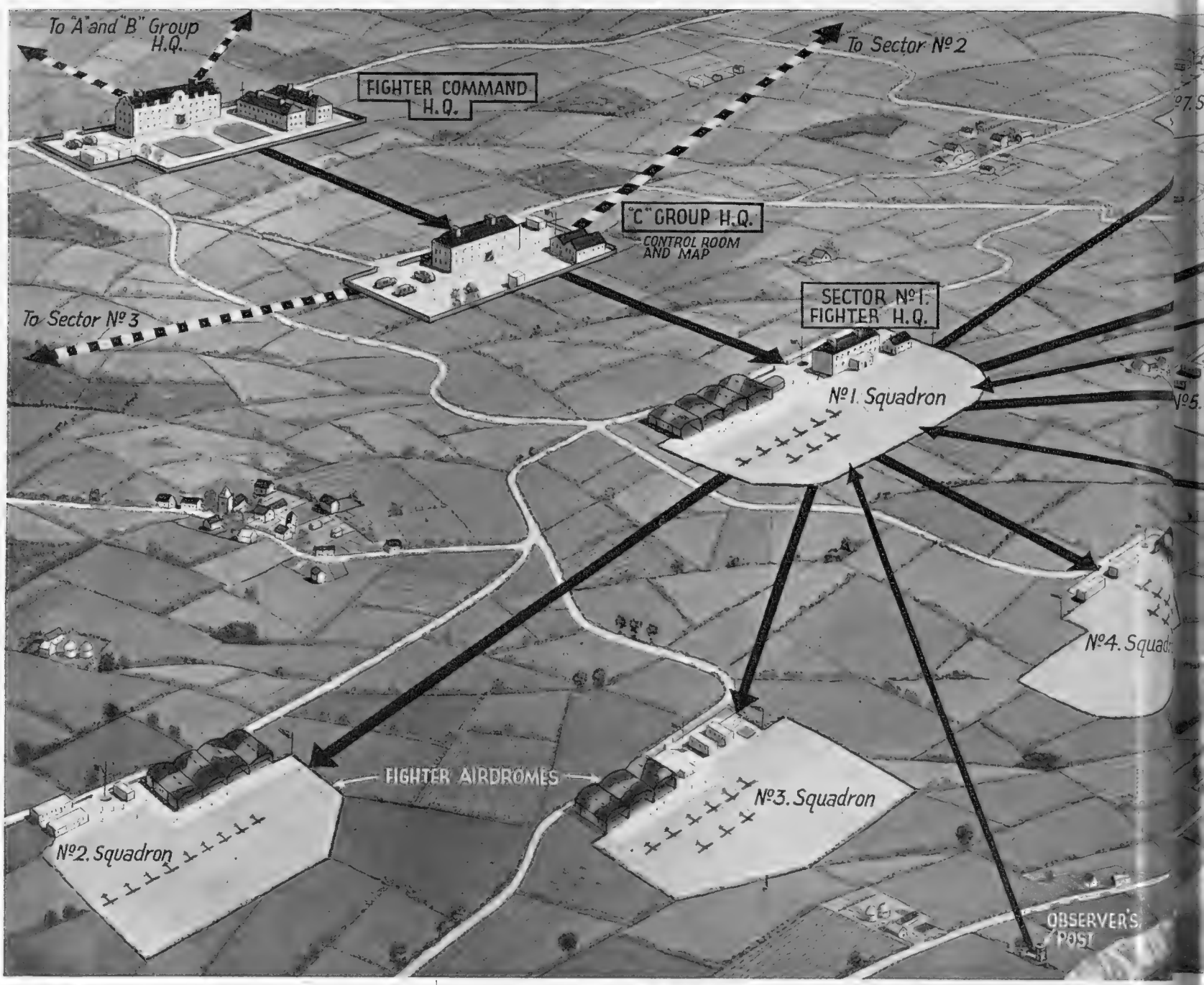
IN ERITREA: Bren-gun carriers of a famous Sikh battalion move up across a typical terrain in East Africa

On right—

BEFORE KEREN: The combined Air Forces of Britain and the Empire took part in the victory of Keren, the toughest stronghold of the Italians in Eritrea. Bomber, Fighter and Co-operational units were all in the battle, the South Africans and Rhodesians co-operating with the R.A.F. Before the final assault the air crews taking part were shown a scale model of the battle area, in sight of the mountains which later were to be attacked. The plan of the battle was explained by Major-General Heath and Air Commodore Slatter, and every man was shown his exact objective. The model was made in the sand. The front of the towering Jebel up which our troops would have to toil fighting all the way, on the morrow was laid out under a screen of camel-thorn bushes. On it every peak and pass was clearly labelled. "Without the help of you fellows in the air," said General Heath, "we cannot hope to carry out our plan of campaign"

THE CONFERENCE BEFORE THE CAPTURE OF KEREN: AIR CREWS WHO TOOK PART IN THE BATTLE BEING SHOWN BY MAJOR-GENERAL HEATH THEIR OBJECTIVES ON A SCALE MODEL IN THE SAND

C



HOW BRITAIN'S FIGHTER DEFENCES ARE MANNED BY THE R.A.F.

A diagrammatic representation of the lay-out of a Sector, with its aerodromes and Fighter Headquarters, showing how the Sector is linked up with Group Headquarters, and that in turn with the Fighter Command Headquarters. There are several Sectors to a Group, and several Groups under the general control of Fighter Command

"THE STATE OF PREPAREDNESS"

Squadrons are maintained at their sector aerodromes at various "states of preparedness." Orders are issued to the squadron leaders by the controller, who studies the operations-room map and puts into the air at selected points a sufficient number of aircraft to intercept the oncoming raiders.

The controller must also keep a constant watch on his resources so that he does not run the risk of being caught by a third or fourth wave of enemy aircraft.

The most relaxed state for a squadron is "Released," which means that the squadron concerned is not required to operate for some hours, and the pilots may relax or enjoy themselves at will, and, in some cases, leave the station. The personnel are employed in routine maintenance and instruction.

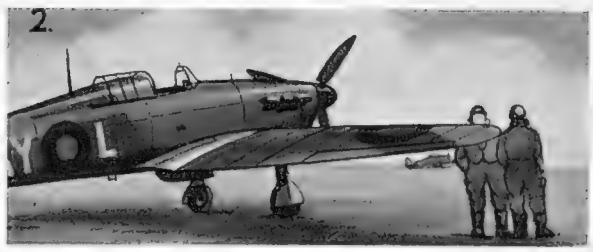
The next state is "Available," and means that the squadron must be prepared to be in the air within so many minutes of receiving the order.

The most advanced state is "Readiness," and pilots in this case must be in their planes and have engines warmed up and running ready for the final signal, "Take Off."

When the fighters report "enemy sighted," the controller's task is over until he may be asked to give them a course to bring them back when the fight is over. Back at the station, the "bag" of unfortunate Nazi airmen is carefully worked out.

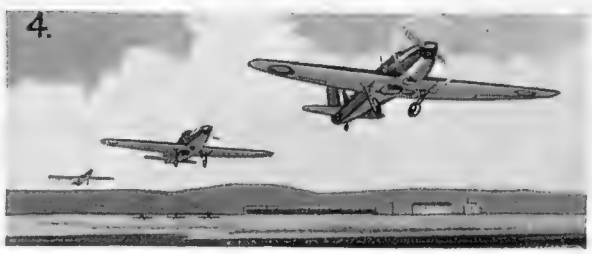
1—RELEASED
The most relaxed state. Some hours before required. Time for maintenance, etc.

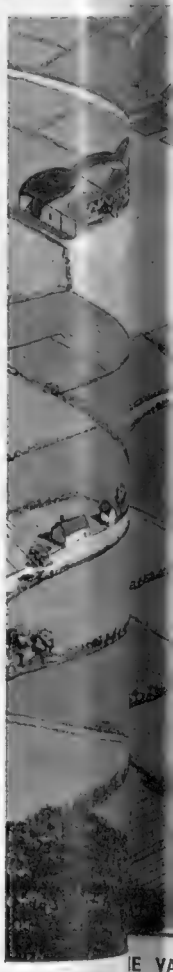
2—AVAILABLE
Must be prepared to take off within so many minutes of receiving the order



3—READINESS
Most advanced state. Engines running. A few minutes to go

4—TAKE OFF
Machines take the air at a signal from the squadron leader





How Britain is Defended Against Air Attack

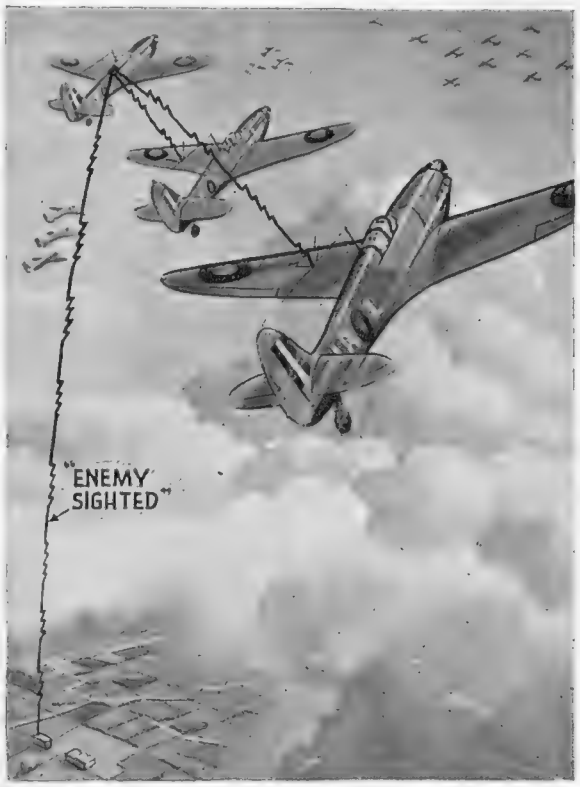
The Methods Employed by the R.A.F. Fighter Command in Beating Off Daylight Attacks by Enemy Bombers and Fighters

BEFORE describing the system whereby our homes are protected by the vigilance of the Fighter Command, something must be said about the efficiency of the system, as the *Luftwaffe* knows it—to their cost! In theory it was thought that a 50 per cent. interception of enemy planes attacking this country would be a very good average, but when the time came, in the great air battles last autumn, 90 per cent., and even 100 per cent., interception was achieved.

It will require very little imagination on the part of the reader to realise what a wonderful achievement this was. It was due entirely to first-class organisation and co-operation of the Fighter Squadrons.

The general principle is that a sufficient number of fighters must be flying at the required height over a certain place where they can intercept the enemy and break up their formations before they can reach their target. But to keep a sufficient number of fighters always in the air would be beyond the powers of the largest air force imaginable, so the fighters are kept on the ground and only take off when a raid appears to be imminent.

The "brains" of the defence system is the Fighter Command Headquarters, which has directly under it a number of Group Headquarters.



Special Diagram-Drawings and Descriptions by

L. ASHWELL WOOD

Each Group Headquarters controls a number of Sectors, each of which has its own Fighter aerodromes and Headquarters. These Sectors are distributed all along the coastline of Britain.

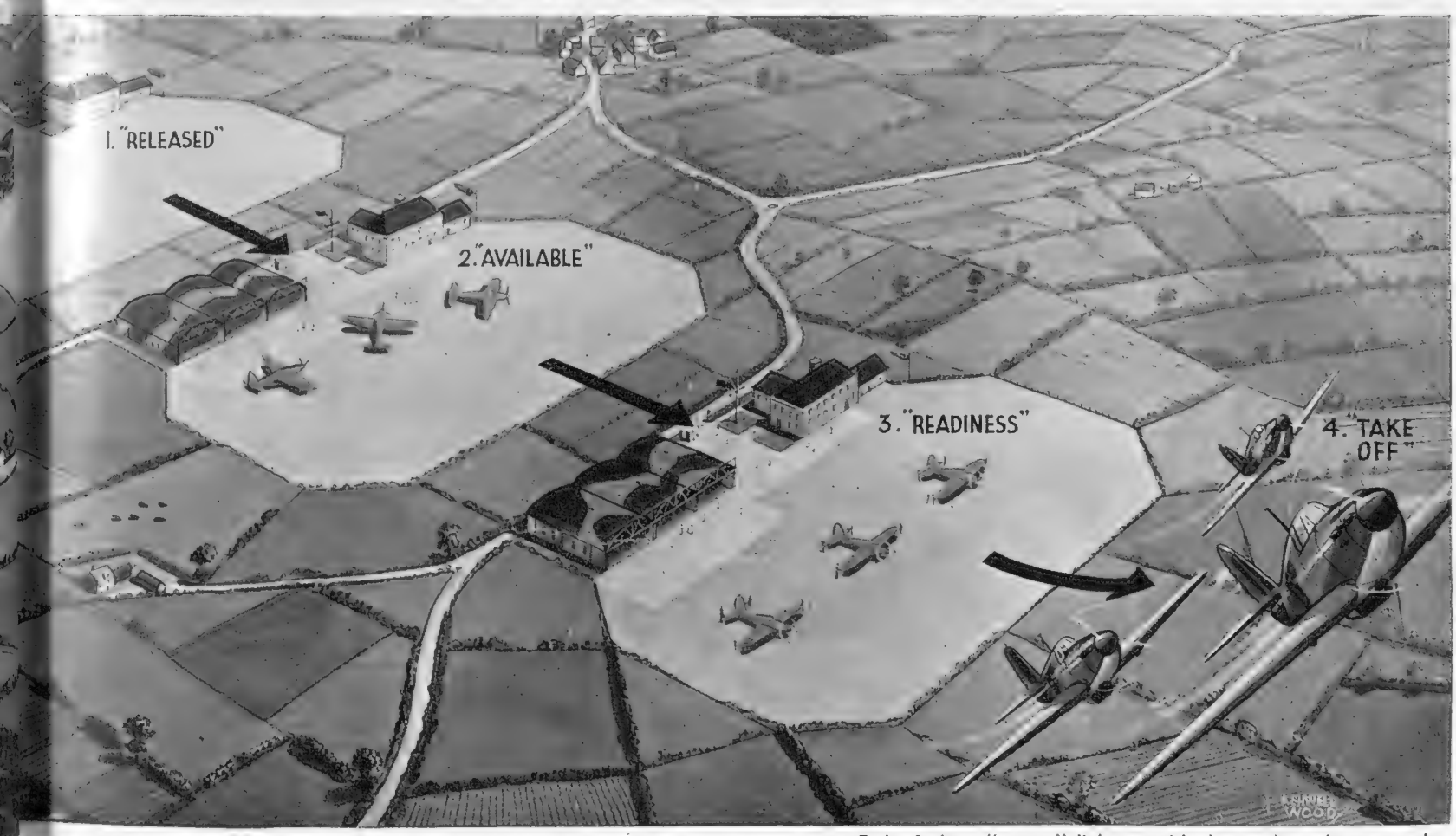
In each group and sector Operations Room is a large map upon which symbols representing the movements of the enemy are placed. The controller has therefore a correct picture of the progress of a raid in his particular area always before him.

The information is received from "several sources," but the best known one is from the Observer Posts stationed all round our coasts, who report immediately on the approach of enemy aircraft.

In addition to this information the controller has set out before him the location and "state" of his own squadrons, cloud and weather conditions, and is in constant touch with the anti-aircraft defences and balloon barrages.

WHEN THE ENEMY IS SIGHTED

The controller is in touch with his fighters by radio telephone and they in turn are in touch with one another. "Enemy sighted" is transmitted immediately to Group Headquarters



IE VARIOUS "STATES OF PREPARED-ESS" SHOWN IN DIAGRAMMATIC FORM

Each of these "states" links up with the numbers shown on the smaller drawings *on the left*. The whole system is a smooth-working and thoroughly efficient one, the proof being the ease with which the fighters are "nursed," manipulated into position, and finally take the air

THE PADDLE-STEAMER GOES TO WAR: H.M. PADDLE-MINESWEEPER "LORNA DOONE" IS ATTACKED BY THREE ENEMY AIRCRAFT, AND DESTROYS ONE AND miscellaneous craft in which they are waging war against the Germans—*Drawing by Monte*

The PADDLER and the RAIDER

The Success of the One-Time Pleasure Steamer "Lorna Doone"

IN happier days the *Lorna Doone* was a pleasure steamer which used to ply between Southampton and the Isle of Wight: it has carried thousands of holiday-makers on that short trip. This year she celebrates her fiftieth birthday, having been built in 1891. To-day the 410-tons paddle-boat is known as H.M. Paddle-Minesweeper *Lorna Doone*, and she is commanded by Temp. Lieut. T. W. Sherrin, R.N.V.R. It has now been disclosed that this gallant and picturesque vessel has just fought a spirited and successful action with three enemy aircraft. As a result of this, one of the three Germans was considered to have been destroyed; a second was seen to be badly hit; whilst the third made good its escape in the poor visibility. The only casualties in the minesweeper were two wounded; and the ship sustained only superficial damage to the bridge and deckhouse from machine-gun bullets. The three enemy planes were Dornier 215's: they carried out their machine-gun and bombing attacks from low clouds. Four large bombs were dropped, but the *Lorna Doone* engaged the enemy with all her guns. Shells were seen to burst close round the raiders, and one of them was seen to be on fire: when last seen it was losing height rapidly. A few minutes after this raider had disappeared in the haze two heavy explosions were heard. A coastguard station in the vicinity reported also that large pieces were seen to be falling from another of the attackers.

As in the last war, many vessels of different design—small and large—have been taken over by the Admiralty. Their crews are fishermen, yachtsmen, and seafaring amateurs of all types and from all strata of society. The work they do is of the greatest value to the Royal Navy, who are the first to acknowledge their indebtedness.

ABLE-SEAMAN G. BEE, the Lewis g who brought about the de of the German raiders. He from Wales

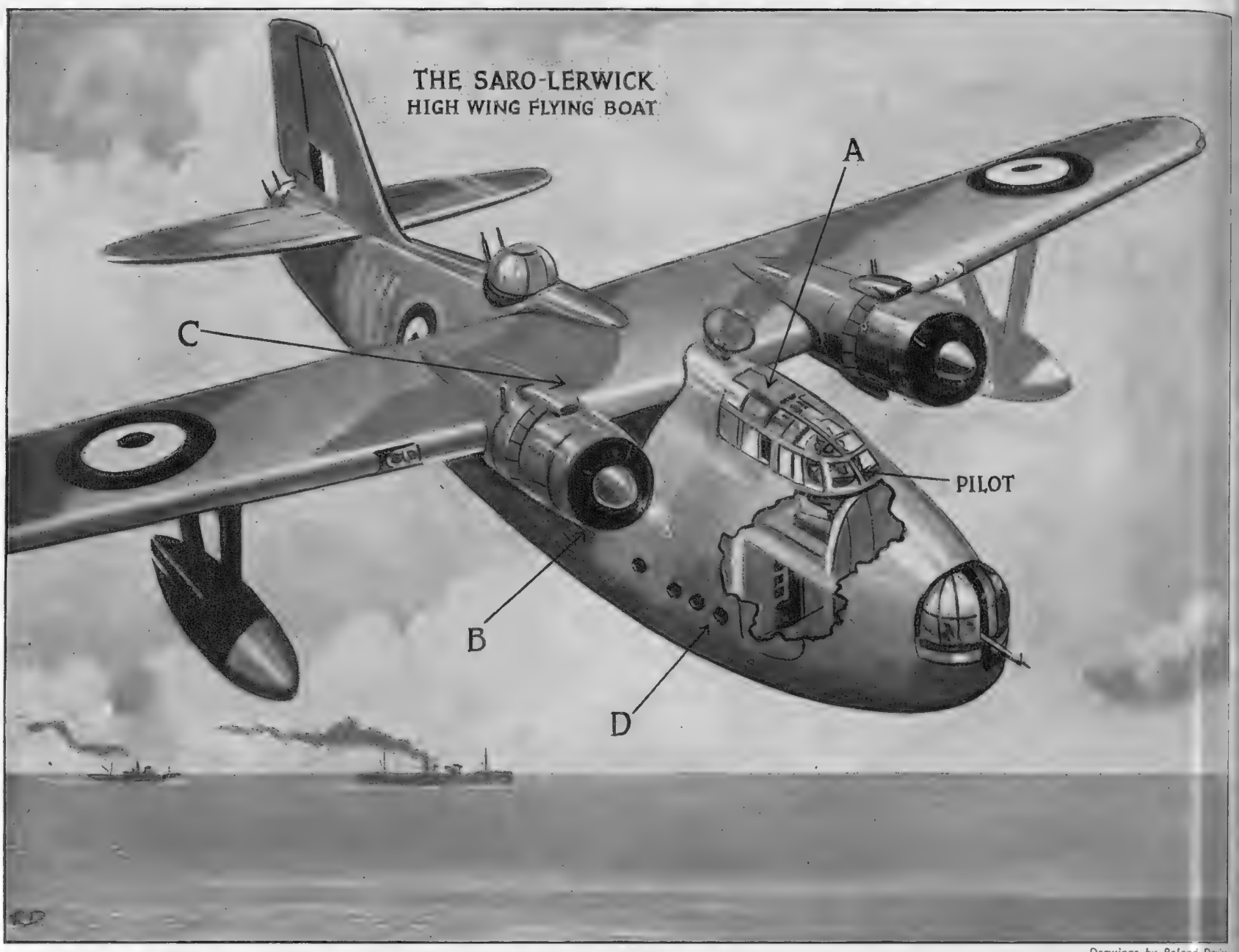
SECOND—an instance of the valiant work of the R.N.V.R. and of the

H.M. PADDLE-MINESWEEPER "LORNA DOONE" as she looks to-day, safe in port after her adventure. Note the business-like-looking guns which have been fitted on her wide deck

THE GUN TURRET OF THE "LORNA DOONE": and the men who served the gun during their encounter with the three Dornier raiders, of which two were brought down

THE OFFICERS ON THE BRIDGE AS THEY WERE DURING THE ATTACK: From left to right are the Navigation Officer, Lieut. H. Cooper, R.N.V.R.; Surgeon-Lieut. P. S. Hawkins, R.N.V.R.; the Commander, Lieut. T. W. Sherrin, R.N.V.R.; and Signalman E. L. Jackson, at the Hotchkiss gun

THE "LORNA DOONE" AS SHE APPEARED BEFORE THE WAR: CROWDED WITH HOLIDAY-MAKERS ON THE SOUTHAMPTON-TO-ISLE OF WIGHT PASSAGE



Drawings by Roland Davies

Above—**THE DESIGN OF A MODERN FLYING-BOAT—THE BRITISH-BUILT SARO-LERWICK :** It will be noticed that this aircraft is a high-wing monoplane, with floats towards the tips of the wings. Although not apparent in Mr. Davies' drawing, this boat (like practically every other flying-boat in the world) has a "step" beneath the hull : the function of this is explained in the accompanying article. The Lerwick bristles with defensive armament, and as it has to maintain long patrols there are adequate cooking and messing facilities on board. In this respect it resembles the equally famous Short Sunderland. At the point marked "A" the navigator has his desk ; at "B" are the flare racks ; at "C" the galley ; and at "D" the photographer's position. Views of these stations are given in the four pictures at the head of the right-hand page

SCIENCE and the BIG SEAPLANE

The Hull Design of the Giant Flying-boats of the R.A.F.

AERONAUTICAL SCIENCE is apt to be exacting. No branch is more exacting than that which concerns the design of the hulls of seaplanes—whether they be of the boat or float variety.

Not only must the hulls or floats present as little resistance as possible in the air—in fact, possess a good streamline shape—but they must perform well on the water also. The whole success of a flying-boat may depend on the skill of the hull designer. Any small miscalculation might mean that the machine would never leave the water. On the other hand, brilliant design backed up by the experience of hundreds of "tank tests" will make possible successful operation from rough water carrying a far greater load than would be possible otherwise.

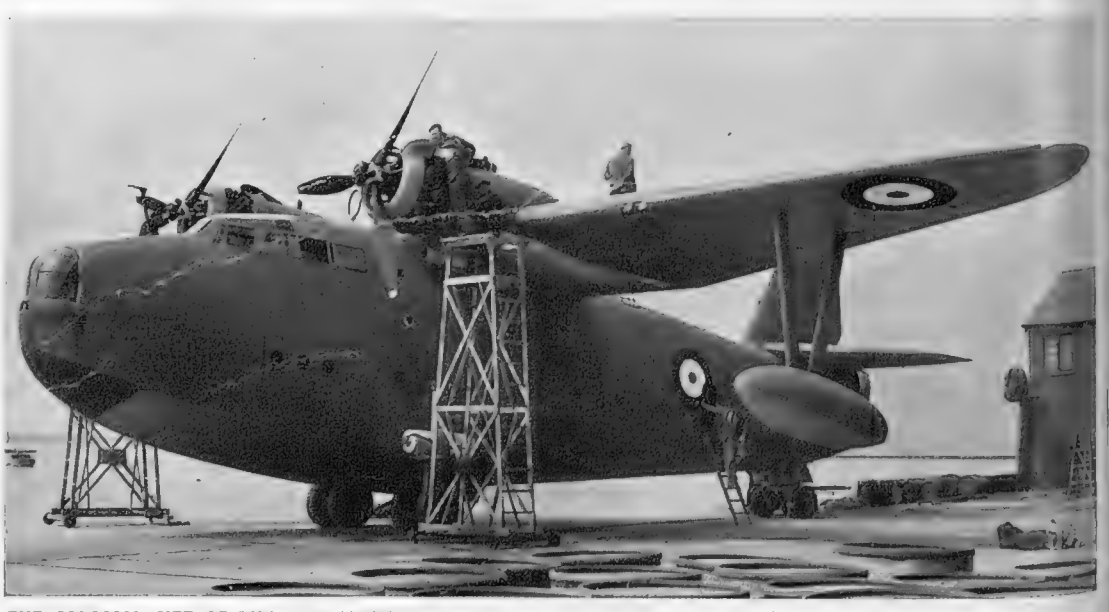
Hull design has advanced at the same pace as the rest of aeronautical thought and practice. The early floats were rather like small versions of Thames punts. They had flat bottoms and wedge-shaped bows in the best Henley traditions. They worked all right in fairly calm water and on the lightly loaded areoplanes of 20 years ago. But they were neither seaworthy nor airworthy enough to last the test of time when speeds and weights began to rise.

The Schneider Trophy seaplane contests did much to improve the qualities of seaplane floats. The tail floats of the early seaplanes, which racked and twisted the fuselages to an extraordinary extent in any choppy sea, were abandoned in favour of twin floats of longer and slimmer shape. On these twin floats the seaplanes were securely balanced. A streamlined form with a pronounced keel was found to give better seagoing qualities and less drag in the air than the old flat-bottom floats.

In America seaplane design went a step further and single-float seaplanes were built. Small stabilising floats had to be attached to the wings to give stability on the water and this counteracted the advantages to some extent. Meanwhile, the design of flying-boat hulls went forward as well. In general, the flying-boat was preferred for the larger sizes of seaplane, as the hull of the boat could be used for buoyancy and for the stowage of the load and the crew.

Wooden hulls, which absorbed a great weight of water after long exposure, gave place to metal hulls. Many shapes were tried, ranging from the narrow knife-like keels of the Rohrbach designs built in this country by the Beardmore concern down to the almost

On right—**SOME OF THE PRINCIPAL BRITISH FLYING-BOATS, WITH TWO AMERICAN TYPES :** Britain is well supplied with these craft—the principal, of course, are the Lerwick and Sunderland ; but the Stranraer and Saro London (made by the same firm as the Lerwick) have also given good service. The Walrus is an amphibian carried in vessels of the Royal Navy, mainly for reconnaissance work. Of the silhouettes given on the right, two are American designs—the Consolidated Catalina and the Glenn Martin bomber. The drawing shows the characteristics of each type, and how it rides on the water at rest and at take-off. The little drawing of the Short Sunderland shows how these huge, but handy and very manœuvrable craft can be taken off the water under the most difficult conditions



THE COLOSSAL SIZE OF THE SARO-LERWICK : Of all the flying-boats operated by the R.A.F., the Lerwick seems to lie deeper in the water, both at anchor and during the take-off. This picture shows how deep the boat really is, and how comparatively short is its wing-span. Its cruising range and duration in flight are considerable

ON BOARD THE LERWICK: The navigator at his station ("A" on the drawing) plotting his course

"B": One of the crew at the rack where the flares are stored

"C": The galley, where hot meals are prepared actually during flight

"D": The photographer, whose camera is electrically operated

cylindrical hulls of the early Supermarine flying-boats. Eventually, the modern form of hull was evolved, a compromise between the two extremes. It combines seaworthiness with excellent aerodynamic qualities. Sharp bows make possible take-off in heavy seas, a well-defined keel adds stability on the water and the flared "after body" cuts down drag in the air. Usually, the modern hull is extended upwards to carry the monoplane wing high above the water to give adequate clearance for the airscrew blades on the motors faired sweetly into the wing.

Naturally, a comparatively narrow hull which has to support wings of great spread must be stabilised laterally so that the boat does not roll one wing tip under, and so capsize. To give stability, small wing-tip floats are used on many designs. They can be seen on the Short Sunderland flying-boats of the R.A.F. Coastal Command. Wing-tip floats are a necessary evil which are easily broken on the water, particularly during refuelling, and cut down speed in the air.

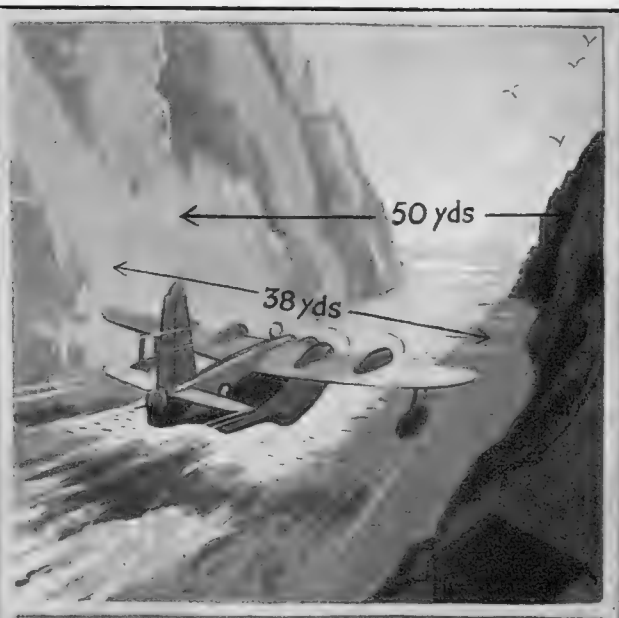
The Americans have sought to overcome some of the disadvantages by retracting the floats into the wing or up to the wing-tips, as in the Consolidated Catalina flying-boats now being supplied to the R.A.F. Another solution is the use of stub-wings or sponsons sprouting from the sides of the hull and useful not only for stability but for landing-platforms as well. The big Boeing Clippers and the German Dornier Do 18 flying-boats are examples of this practice.

Hulls and floats have one point in common. That is the "step," usually placed about half-way down the length. The step makes possible the "unstick" from the water by destroying the capillary action which tends to keep the hull and the water fast together. Once over the "hump" speed the hull or the float rises on the step and planes along the surface until the wings take the load and the seaplane takes off.

In the future we may see many advances in the design of the hydrodynamic as well as the aerodynamic aspects of boat and float seaplanes. We may even come to the retractable planing bottom in that eternal quest for more speed at less cost in horse-power or in that commercial criterion "ton miles per gallon."

Below—FLYING-BOAT HULLS—A COMPARISON

Both the American Types Illustrated are in Service with the Coastal Command, R.A.F., or are on Order.

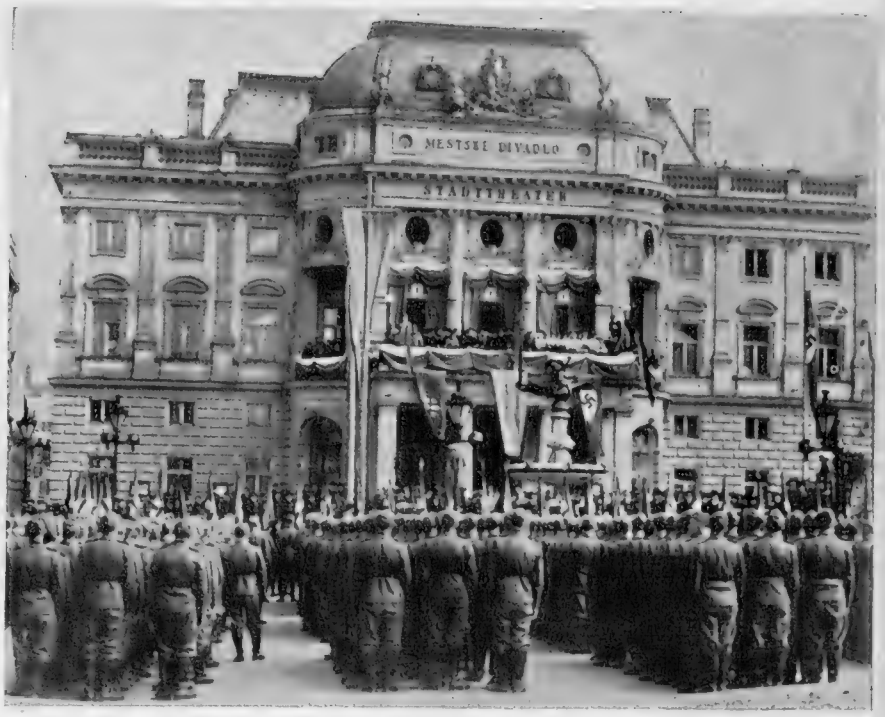


SHORT SUNDERLAND TAKING OFF IN A NARROW ICELAND FIORD

FROM THE ENEMY'S CAMP

And from Continental Countries Under His Domination

THE PUPPET PRESIDENT SALUTES HIS CONQUERORS : Father Josef Tiszo, the Quisling of Slovakia (on right), during the "second anniversary of Slovak independence." On his right is Professor Tukka, the Slovak Premier. It was largely owing to Father Tiszo that the country of Czechoslovakia was invaded and taken over by the Germans



MASSED RANKS OF THE "FREE (!) SLOVAKS" The general scene outside the Pressburg National Slovak Theatre during the recent celebrations of Slovak "Independence." It was the easy overthrow of the Czechoslovaks which opened the road for successes achieved by the Nazis in Central Europe : and for this Father Tiszo was largely responsible by his creation of an independent puppet government

HITLER REVIEWS HIS TROOPS IN UNTER DEN LINDEN : Standing on a rostrum on the right of the picture, Hitler is "reviewing troops of the old German Army, Navy and new German Army" at a Memorial Day Parade in Berlin's famous Unter den Linden, which suffered severely in the recent R.A.F. raids on the German capital

"THE WAGON OF COMPIÈGNE" ON VIEW IN THE BERLIN LUSTGARTEN : This is the famous railway carriage in which the Armistice was signed in 1918 : it was used by Hitler for the dictation of the humiliating Peace terms to Marshal Pétain last year. By Hitler's orders the carriage was later taken to Berlin. It is interesting to note the obvious marks of shell fragments from bombs on the columns on the right

THE NAZIS EXHIBIT THEIR MIGHT TO THE NEW HUNGARIAN PREMIER : Ladislaus von Bardossy is the new Premier of Hungary who has taken over since the suicide of Count Telecki. This inspection was probably intended to demonstrate to him the might of Germany

HERR VON RIBBENTROP GREETS VON BARDOSSY : Apparently the German Foreign Minister approves of the choice of Premier to succeed Telecki, who committed suicide rather than face up to the German demands. The new Premier, von Bardossy, is more pliable—so much so that Hungary, too, marched against her neighbour, Yugoslavia, and is now in occupation of the Banat region

HOW A BOOM AT THE MOUTH OF A RIVER IS ERECTED—*Drawing by E. G. Lambert*

The boom must be easy of opening, for the passage of friendly shipping: therefore a section in the centre is constructed to swing open to allow ships through. No longer can small craft "jump" the boom, because iron supports are now erected on the top. The ends are secured in the shallow water at each side of the river mouth. The boom defence vessel helps to guard the spot, and also to allow the free passage of shipping. At important harbours the defences are, of course, of much greater complexity, and incorporate mines and other devices

PROTECTING OUR PORTS Against ATTACK

The Boom Defences, which Keep Out Enemy Vessels, and the "Boom Defence" Craft which Watch Over the Booms

Described by FRANK C. BOWEN

BOOMS of various kinds have been used for the defence of ports since the very beginning of sea warfare; the first definite mention goes back to 700 B.C., when gigantic chains were used at Byzantium, but they may have been older even than that. All through the Middle Ages they were a common means of defence, their form varying and frequently being reinforced by scuttled ships. The advent of the torpedo boat in the nineteenth century brought them into prominence, although the manner in which torpedo boats and destroyers repeatedly jumped right over them in manœuvres did something to check enthusiasm, and little attention was paid to them in the years which immediately preceded the late war. Then the possibilities of submarine attack revived them, and during the present struggle they are of more importance than ever.

The nineteenth-century boom against surface vessels consisted of huge baulks of timber and spare spars, lashed together with the strongest wire rope and kept in place by numerous anchors and chains laid out on either side with due allowance for the changing tides. After they had been jumped on several occasions, and one had been cut without difficulty by H.M. ram *Polyphemus*, they were reinforced by steel girders, some of them horizontally to give extra strength to the structure and some of them set at an angle to rip the bottom out of torpedo craft. A small section in the middle of the boom was not anchored. Secured at one end to the main structure, the other end was made fast to the boom defence vessel, generally an obsolete sloop or gunboat, which was normally moored to the other anchored section, but which steamed ahead, carrying the free section with her, when friendly ships wanted to pass in or out. This made quite a practical gate. The shore ends of the boom, where the water was too shallow for the free passage of ships, were often set on permanent piles driven into the mud.

Before the war broke out in 1914 there was some talk of improving the standards of boom defence in case enemy submarines attempted to dive under the obstruction, but the German submarine fleet was not taken seriously until its first successes, and nothing was done officially. At Cromarty the King's Harbour Master was Commander D. J. Munro, an officer who had entered the Navy from the Merchant Service and who had been trained in sail. He realised the danger and started to construct an entirely new type of boom, with the usual precautions against surface vessels, but measures against submarines which were his own idea and which fully utilised his experience of rope work gained while he was in sail. To begin with, the Admiralty was displeased at his action, especially as it used up most of the mines allotted to the area, but examination proved the ingenuity and practical advantages of the new boom, and it was not only approved, but Commander Munro was put in charge of all boom-defence work. He had his hands full with Scapa Flow, which had been regarded as impregnable to submarine attack on account of its tortuous channels and fast currents, but which was recognised as terribly vulnerable. Most of the entrances were closed by scuttling liners and cargo ships, but the Fleet was homeless while the remainder were being protected by booms, and it was during this period that H.M.S. *Audacious* was sunk. When the booms were completed no submarine ever contrived to get into the Flow, although many made the attempt, and similar booms were soon stretched across various waterways with complete success.

To look after these booms, and the anti-submarine barrage across the Straits of Dover, a number of boom-defence vessels were built in 1917 and 1918, steel lighters 100 ft. long and between 275 and 300 tons displacement, carefully shaped to ride to their moorings as easily as possible in bad weather. They carried crews of between ten and thirty men, according to their position and duty, were commanded by R.N.R. or R.N.V.R. officers, and carried one or two 12-pounder guns, in addition to searchlights to show up any attack. Their only machinery was for the purpose of generating current for these searchlights, and if they broke adrift they were helpless until they were picked up.

When the 1935 naval estimates were presented it was realised that Germany definitely aimed at rearmament, and in spite of the Treaty of Versailles it was tolerably certain that she would again employ submarines. The first of the new boom-defence vessels were therefore included in the building programme, but they were very different from the wartime lighters. Nearly forty of them were built, varying from 530 to 730 tons displacement, the contracts being placed with merchant shipyards which were accustomed to the construction of tugs, trawlers and dredgers. Given great strength, they were not dependent on their moorings, but had steam machinery for a speed of between ten and twelve knots. As they were to be stationed at all the naval bases, at home and overseas, opportunity was taken to fit them for other duties as well as the handling of the boom, and they have done good work in salvage and in the laying and maintenance of the big mooring buoys. In addition, several trawlers were converted, more or less thoroughly, for the work, but they cannot do it as efficiently, or cover as many miscellaneous jobs, as the specially designed vessels, which, in normal times, are all armed with a 3-in. anti-aircraft gun (which is probably reinforced in war).

The construction of these ships, which incidentally were most difficult little vessels to design satisfactorily, has been very fully justified since the outbreak of war. They have fulfilled all their intended functions excellently, and have proved themselves capable of doing a few more when they are not fully occupied in the defence of the various naval and commercial ports, for which duty they have been reinforced by a number of ships taken up from the Merchant Navy.

WHAT A BOOM DEFENCE VESSEL LOOKED LIKE IN THE LAST WAR: This picture was taken at Mudros during the Dardanelles operations: it shows Submarine E2 passing the boom defences and the boom defence vessel after a trip up the dangerous Straits. As Mr. Bowen explains in his article, boom vessels to-day are much different, both in appearance and in function

THE MEN WHO GUARD THE BRITISH BOOMS: The average citizen knows little of the Boom Defence organisation which guards the entrance to our ports. But for this essential branch of the Royal Navy, no ship which dropped anchor in harbour would be safe from enemy attack. The Defences consist of net obstructions reinforced by explosives which are stretched across the entrances to harbours, with special arrangements to permit of the passage of friendly shipping. Guard-ships are provided in the booms to guide shipping and prevent unauthorised entry. This picture, on the bridge of a "Gate ship" shows (on the left) the Boom Defence Officer, and the officer in command of the ship. The latter, before the war, was skipper of a fishing trawler on the Tyneside

THE DEVOLI OILFIELD IN ALBANIA : Although little known, Albania produces 15,000 tons of petroleum a month. On the Italian side of the Adriatic, at Bari, is a big oil refinery to cope with the oil brought by pipe-line to Valona, and thence shipped across the Adriatic to Italy

THE RUMANIAN OILFIELDS, THE WHOLE PRODUCT OF WHICH GOES TO GERMANY : Of this oil about 45 per cent. is conveyed to the Reich by rail ; another 30 per cent. goes by way of the Danube through Yugoslavia. Hence Hitler's need to crush that country quickly

HITLER'S SEARCH FOR OIL

Which Explains the Thrust into Albania, and the Drive Towards Iraq and the Eastern Mediterranean

OIL is such a vital factor in modern warfare that it is possible to interpret the recent strategic course of the war in terms of oil. To do so, however, would be an over-simplification ; to ignore the potency of the fact of oil would, on the other hand, be a vast error.

Apart from other factors, oil certainly provides a most powerful incentive for the attack on Greece, the savage assault on Yugoslavia, the German attempt to restore the Axis situation in Albania, the engineering of the *coup d'état* in Iraq, the Nazi intrigues in Iran, and the obvious worsening of relations with the Soviet Union.

In this formidable catalogue of events be sure the fact of oil has never been far from the minds of the German strategists.

Consider Germany's latest victim, Yugoslavia. In Belgrade I often walked to the ramparts north of the city from which one can easily see the point where those two great rivers, the Danube and the Sava, meet. Up the Danube from Rumania, from the Ploesti oilfields, come the tanker barges with the motive force for Hitler's Panzer divisions and his *Luftwaffe*.

Owing to the shortage of suitable rolling-stock, only about 45 per cent. of Hitler's oil can be transported to the Reich by rail ; the Danube carries another 30 per cent., and it would carry the remainder—sorely needed—but for the shortage of tanker barges.

How could Hitler rest easy while the life-line of his army was in reach of the small but powerful Yugoslav Air Force ? From his point of view that was a danger spot, so Yugoslavia either had to be betrayed into the so-called New Order or be crushed militarily. The Yugoslavs refused to sell themselves.

There was a second oil motive operating in the attack on Yugoslavia—Albania. The drive through Yugoslavia to attempt the join-up with the retreating Italians was not merely an attempt on Hitler's part to restore the waning prestige of his partner in crime, Mussolini.

Hitler did not ignore the fact that the Greek advance was beginning to threaten the Albanian oilfield, Italy's only natural source of oil. The loss of that source would mean a further drain on the not too plentiful supplies of the Reich.

It has not been fully appreciated that one of the main reasons for the Italian invasion of Albania was the possibility of capturing the Albanian oil supply. The Dictators think ahead.

These oilfields, though not extensive, gave to Italy in the year before the outbreak of war 15,000 tons of petroleum a month, with an expected total of 200,000 tons a year. To a man without a loaf a crust of bread is a lot.

In 1939 the Italians in Albania were falling over themselves in an effort to accelerate production, especially in the oilfield of Devoli, since threatened by the advancing Greeks. Hitler doubtless calculated that his attack on Greece would relieve the pressure on the Italians.

The talk in this area between the Devoli and Skumbi rivers during the Italian rush was of little but oil, reminding one more of Texas than this rugged land of agriculturists and cattle-raisers. Transport here, too, was a major problem, so the Italians constructed a pipe-line from Devoli oilfield to the Bay of Valona, chief Greek objective in the present struggle. On the other side of the Adriatic the Italians built an oil refinery at Bari, which doubtless provides a target for the R.A.F.

The actual capacity of the pipe-line which reaches the sea in the small oil port of Uji i Ftofët, near Valona, is estimated at about 300,000 tons a year.

Turn east. Behind the *coup d'état* in Irak is the German dream of a great oil supply for the future and to hinder our own possible supplies in the present.

THE KUCOSA OILFIELD IN ALBANIA IN THE DEVOLI REGION : This is the most important source of oil supply possessed by Italy. The field yields something over 100,000 tons a year of heavy oil and this is piped to Valona : thence it is conveyed by tanker to the Italian refineries. The picture shows pumping jacks in the foreground for pumping up the oil from a number of wells

THE "LUFTWAFFE" HAVE TO EXERCISE ECONOMY ! Severely affected by the growing shortage of petrol and oil, the *Luftwaffe* is having to economise in its use of these precious fluids. For warming-up their engines during the recent cold weather, hot air has been greatly used. This picture shows a portable "hot air" unit circulating warmth around the engine of a bomber before starting up

If the German attack in the Balkans is successful, no doubt, despite all their assurances, the Nazis will attempt to destroy Turkey and open the way to the oilfields of Iraq. Iraq supplies 4,000,000 tons a year and the oilfields are connected by a pipe-line to Haifa and Tripoli on the Mediterranean. Thus the seizure of the Iraq oilfields would mean the cutting off of the British Navy's oil supplies, even if it did not mean increased supplies for the Nazi war machine.

Once across the formidable barrier of the Bosphorus, the German drive to Kirkuk, where the pipe-line begins, would not be too difficult, for the Anatolian plateau does not offer many obstacles to military movements. Here most of the inhabitants are peasants ; there are few large towns, many roads.

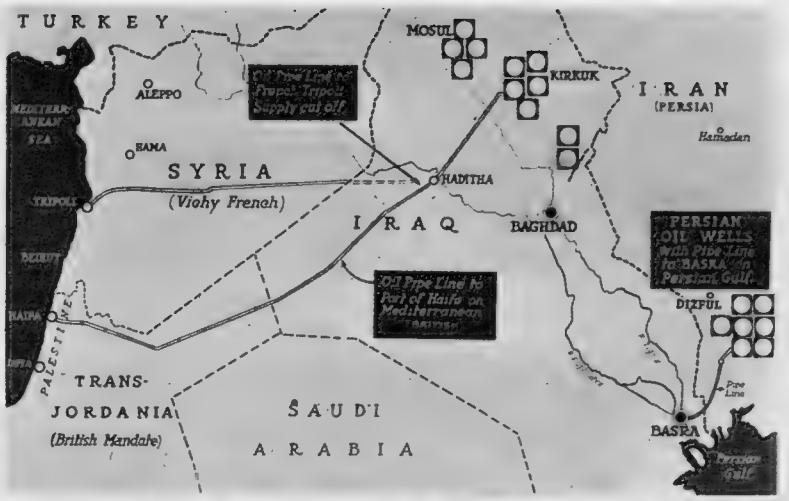
Such an advance would make possible an attack on Iran, great oil prize of the Middle East, supplying 10,000,000 tons a year, and its resources in this direction far from fully exploited. No wonder that in this still almost unknown land the agents of the Nazis are as busy as beavers.

Meanwhile, in Berlin there is considerable uneasiness about the Russian contribution to the Nazi oil pools. They argue that if Russia gave Germany her total petrol export it would amount to 1,500,000 tons, but the Soviet suavely point out that they have undertaken to send petrol to other countries, particularly China and the Balkans. Well, say the Germans, if we liquidate the Balkans, what then ?

Oil talks so loudly to the Germans that they must get it, and more of it, or bust in the long run. They recall that their peacetime requirements came to 6,000,000 tons a year, and their wartime estimate to 15,000,000 or 20,000,000 tons. Oil alone will not win the war, but the lack of it will certainly lose it for one side or the other.

Emrys Jones

THE RICH OIL CENTRE IN THE CAUCASUS : Within this area lies a very rich oil-bearing region, from which most of Russia's needs, and a good deal of Germany's, are satisfied. From Baku to Batoum and Novorossisk are numerous first-class wells



IRAQ AND IRAN—THE WORLD'S MOST IMPORTANT OILFIELDS : From Kirkuk and Mosul, in Iraq, the oil is piped to Haifa, in Palestine, across the desert. The connection at Haditha to Syria was severed on the defection of France in the summer of 1940. The Persian supplies, which are considered to be almost inexhaustible, are connected to Basra on the Persian Gulf, where an Imperial Force has now landed

OILFIELDS of the NEAR EAST

By A. Beeby Thompson

THE obvious anxiety of Germany concerning her oil supplies is one of the factors which impel a movement eastwards towards the great oilfields of Rumania, Russia, Iraq and Persia. The domination of the Galician oilfields of Poland by the Axis Powers did not materially benefit the Germans, as for years the output has been small and falling, and extensive research had failed to reveal any important new sources.

The military occupation of Rumania was a much more serious affair, and gave Germany control of very valuable supplies of oil, but, as in Poland, the output has been diminishing of late, due to the failure to find new fields comparable in productivity to the older regions. The Kucova oilfield, near Berat, Albania, was too small to be a critical factor in the conflict, although its output of around 100,000 tons a year was very useful to Italy, whence all the oil was sent for treatment.

Except in Rumania, no major oilfields have been located in Europe outside Russia, where most valuable deposits have been worked for decades at a number of spots both north and south of the Caucasus, within easy reach of the Black Sea. The richest oilfields in Russia are, however, located around the Caspian Sea, on the Apsheron Peninsula, where the world's most prolific oilfields have been operated for fifty years, and still continue to give large productions.

On the Asiatic side of the Caspian, other oilfields exist, and sporadic developments extend far into the Trans-Caspian regions and Turkestan. But by far the most important oilfields yet discovered in the world are in Iraq and Persia, where, unlike the other major oilfields of the world, petroleum is secreted in porous limestones and dolomites, instead of sands, and, in consequence, single wells, strategically placed, drain areas very much larger than those in sands, and give larger and sustained outputs until virtual exhaustion of the reservoir rock.

The known reserves of cheaply procurable oil in Iraq and Persia are almost beyond human computation, and represent by far the greatest and most readily accessible mineral resources in the world to-day.

With the advent of Greece as an opponent of the Axis, the oilfields of Rumania become exceedingly vulnerable to attack by British and Allied planes.

WHERE GERMANY HAS FOSTERED A PRO-NAZI RISING—IRAQ AND ITS OILFIELDS : Little wonder that Iraq has a fascination for Hitler : it produces 4,000,000 tons of oil a year. It is from here that our Navy in the Mediterranean receives its oil supplies. In addition, the supplies from many of the Persian wells can be controlled by the Iraquis. Hence the reason for our recent action in landing forces at Basra. By way of a complaisant Syria, Iraq could be reached by the enemy from the Mediterranean

NAZI TROOPS GUARD THE RUMANIAN OILFIELDS : The first picture to be received in this country of Nazi troops actually on guard in the oilfields—so vital to the German war machine, now more than ever before. The members of the A.-A. gun detachment are hurrying to their posts during a practice alarm

On a broad, flat plain around the town of Ploesti, within view of some of the oilfields, are centred all the chief refineries of the country, and their destruction, together with the pipe-line systems, tankage, pump and filling stations, and accessory plants, would deprive Germany of some 6,000,000 to 7,000,000 tons of valuable finished oil products a year, including the much-wanted petrol and lubricants.

Modern refineries full of elaborate mechanism, with high smoke-stacks and towers, particularly susceptible to damage, offer an inviting target to aircraft, and their reconstruction or reconditioning after bombing would be a long business. The railways, too, upon which dependence would be placed for transport, are exceedingly vulnerable to air attack where they traverse the valleys and gorges of the mountains, when fast-running streams are crossed and re-crossed by bridges that would take a long time to replace if damaged. Storages of oil in the countries which have, under compulsion, joined hands with the Axis are unlikely to escape the visitations of Allied airmen, thus complicating the conveyance of petrol so essential for the mechanised vehicles in use.

The oilfields of Southern Russia are all within range of aircraft should Russia enter the conflict on one side or the other. Here, also, the chief refineries are clustered on the outskirts of Baku and Grosny, where fierce air attacks would cause grave consequences. To what extent Russia is now supplying Germany with oil is not known, but its conveyance either by railway or sea entails a long and costly journey, complicated by the congestion and disorganisation of traffic.

Baku oil is carried by rail and pipe-line over the 600-mile journey across the Caucasus to Batoum, from whence tankers formerly conveyed it to the various markets. Although the production of Russia has risen to 25,000,000 tons a year, the demands of the country have increased in a higher proportion, due to the transfer from hand and animal usage to mechanical operations in all spheres of activity. Various British and American economists have reached the conclusion that Russia has very little surplus for export, and it has been reported more than once that she is refusing supplies to Germany. Anyway, the destruction or capture of the Baku or Grosny oilfields would be a serious blow to Russia, and no wonder she watches with grave concern the encroachment of Germany towards the Black Sea, hitherto almost her sole preserve.

The Uralsk oilfields north of the Caspian Sea are quite unable to furnish Russia's oil requirements, which mainly reach the centre of the country by water, via the Caspian Sea and Volga with its canal system.

The distance from Iraq to Baku is only about 600 miles, and from Turkey the distance would be insignificant. The much more important oilfields of Iraq are centred near the Tigris in the Mosul district, to which direct rail access is obtained only by the Bagdad Railway, whose eastern to western termini are at Istambul and Basra. Oil development has been mainly concentrated between Kirkuk and Erbil, where an enormous proved acreage offers almost limitless potentialities. From this renowned field, pipe-lines have been constructed to Haifa and Tripoli across waterless deserts, in part strewn with basaltic boulders, over which transport is extremely difficult. A crossing of the Tigris is made by the pipe-line where the river-bed is a mass of oil seepages and the banks lined with oil-soaked strata. This pipe-line has a capacity of 4,000,000 tons a year, and prior to the war arrangements had been made for doubling that capacity.

The importance of the Iraq oilfields has never been under-estimated by the British Government. By treaty with the Arab Government, their defence has been insured more securely than many other parts of our Empire, and these lands, depend upon the protection of Britain. Not far from Bagdad a powerful air force is maintained in a state of readiness for any emergency. The Irakians themselves would be quite incapable of protecting their country against powerful invaders envious of the country's vast oil resources, the royalties from which go a long way towards supporting the State.

With a friendly Turkish nation as neighbours to control the only railway into Iraq, the oilfields are reasonably secure from a western invasion, for any incursion from Syria would involve a long, hazardous journey over waterless deserts over which all supplies would have to be brought.

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The THREE PHASES of THE GERMAN ATTA

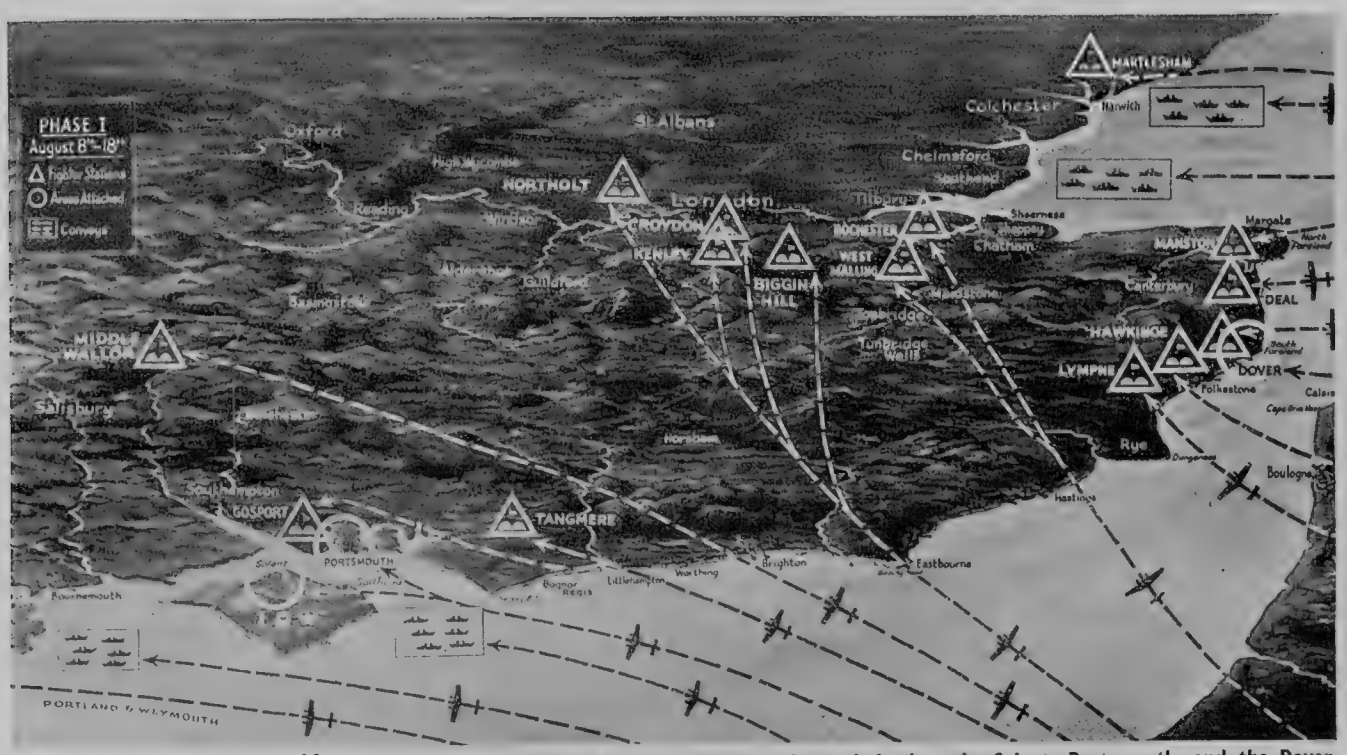
—Drawings by E. G. Lo

On left—

Before the German Army land it was necessary to destro coastal convoys, to sink or imm such units of the Royal Navy as dispute its passage, and above drive the Royal Air Force fro sky. He, therefore, launched a of air attacks, first on our shippi ports, and then on our aerod

In the first stage the enem over massed formations of b escorted by similar formatio single- and twin-engined fi Using these tactical formatio enemy made 26 attacks: he beg renewing his assaults on our shipp 60 enemy aircraft in the morni more than a hundred in the aft of the 8th deployed on a front o 20 miles of the Isle of Wight. days later Portsmouth, Weyr the Thames Estuary and the H area were attacked. Large force also sent to deal with our aerodromes in South and Sout England.

In ten days Goering lost 697 against our own 153 (and 60 pilots were saved).



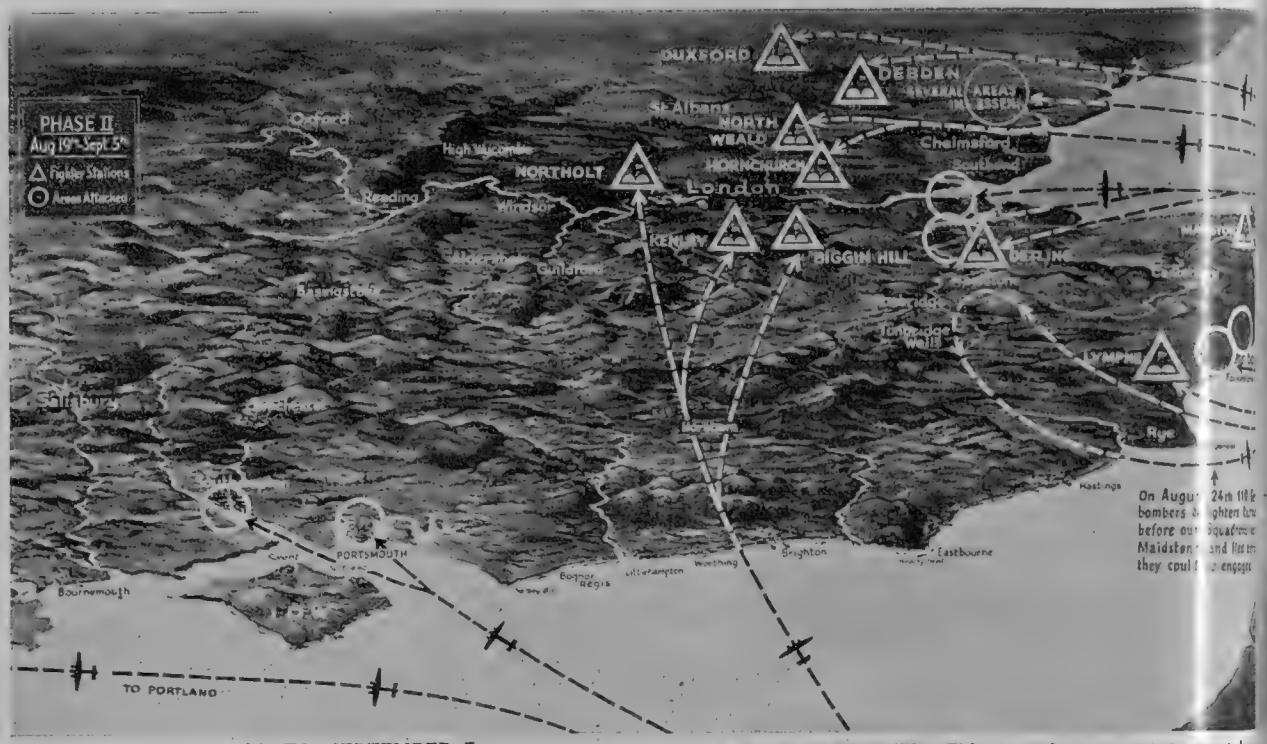
PHASE I.—AUGUST 8 TO 18: THE BEGINNING OF THE BATTLE.—This was the period when the Solent, Portsmouth and the Dover areas were attacked, as well as merchant convoys in the Channel. During this first phase the enemy lost heavily in aircraft, and in personnel he lost about seven pilots to every one of our own

On right—

Between the end of the first stage and the active beginning of the second there was an interval of five days which were spent by the Germans in widespread reconnaissance by single aircraft. During this lull Goering evidently decided that a change of objectives was necessary. Perhaps he thought that he had achieved the necessary results, and that Portland and Portsmouth together with our coastal aerodromes were virtually out of action. . . . .

The main attack was now delivered on a wider front. Enemy tactics were also changed. The enemy then proceeded to deliver some 35 major attacks between August 24 and September 5. Raids on Portland, Dover, Manston and several areas in Essex were carried out, and there was fierce fighting over the North Foreland, Gravesend and Deal. Heavy assaults were also made in the Dover-Folkestone area and over the Thames Estuary. On August 30 and 31 the assault was switched to inland fighter aerodromes, when 800 aircraft were used by the enemy.

This Second Phase cost the Germans 562 aircraft, and ourselves 219 (but 132 of our pilots were saved).



PHASE II.—AUGUST 19 TO SEPTEMBER 5: THE ATTACK ON THE INLAND AERODROMES.—This was the attempt to beat bac fighter defences, away from the coast: the attacks ceased when Goering decided to switch over to attacks on the Capi the Empire itself

PHASE III.—SEPTEMBER 6 TO OCTOBER 5: LONDON VERSUS GOERING: Now came the attacks on London, mainly by night—thus reversing the *Luftwaffe's* own precepts. During this period 3,291 day patrols of varying strengths were flown by the Royal Air Force

On left—

Whatever Goering set accomplish in the two previous may be a matter of speculation. is known, however, is th September 7 he quite suddenly his attack from fighter aerodro to industrial and other targets, began by making London his objective. On that day the att the capital were made in two distinct waves, and with little they continued until October 5 was the last desperate attempt a quick victory: it could no achieved cheaply, for the L had already suffered terrible But it might still be possible to London and thus to win t Goering still believed in numbers: he put forth all his in a final endeavour to knock d ninepins at any cost. The L delivered 38 major attacks between September 6 and Oct From September 7 onwards was also attacked heavily by On September 15 the fighting came to a climax, when 500 aircraft fought a running fig our Hurricanes and Spitfires Hammersmith to Dungeness. the enemy 185 aircraft.

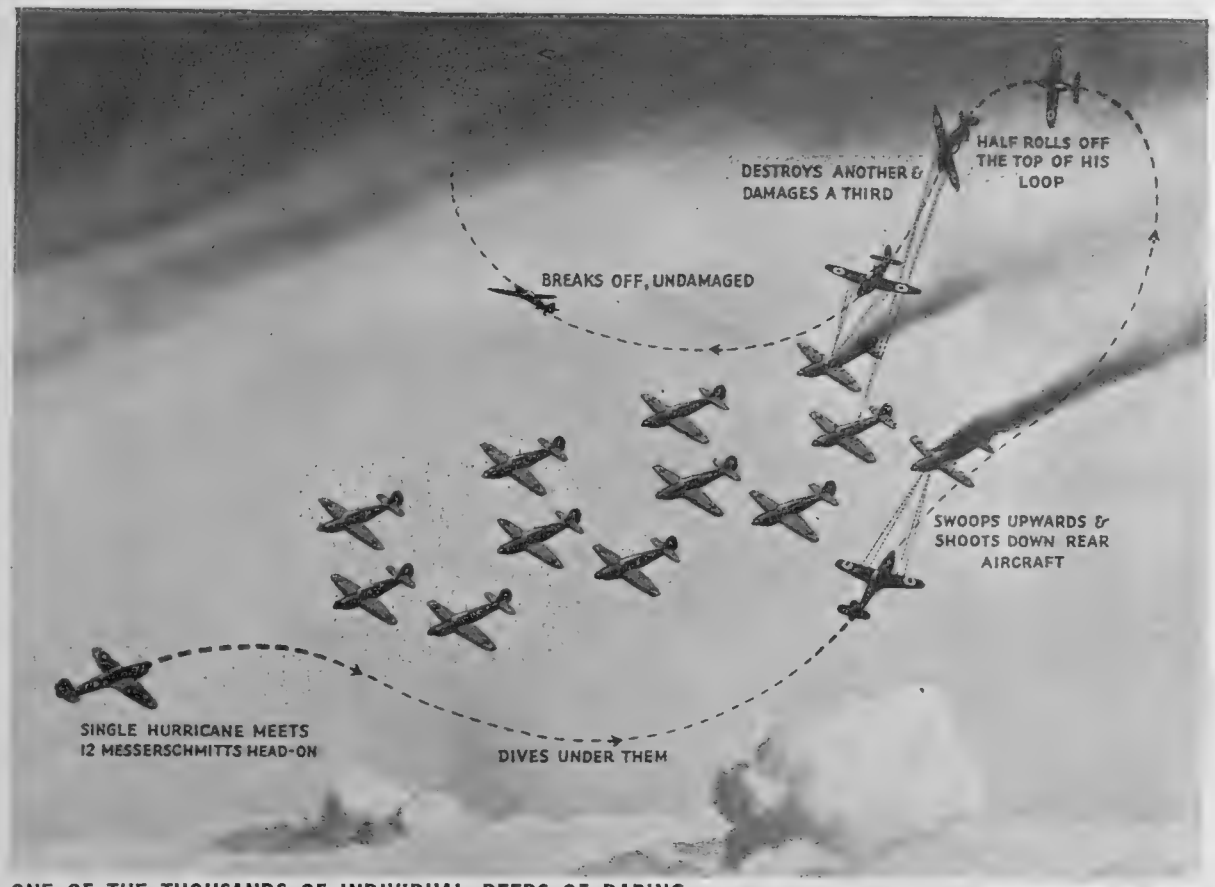
Altogether, between Septe and October 5 the enemy los hundred and eighty-three aircra

STRONGER SCREENS OF FIGHTERS: SHEER WEIGHT OF NUMBERS: HOW THE GERMANS ATTEMPTED TO MAINTAIN THEIR BOMBING ATTACKS DURING THE SECOND PHASE OF THE BATTLE OF BRITAIN

On left—

In the First Phase of the Battle of Britain the enemy bombers normally flew at from 11,000 to 15,000 ft., descending frequently to 7,000 or 8,000 ft. in order to drop their bombs. Our fighter tactics at this stage were to deliver attacks from the stern on the Me 109s and Me 110s. This type of attack proved effective, because these aircraft were not then armoured. During the lull between the First and Second Phases, however, Goering evidently decided to change his tactics as well as his objectives. The number of escorting fighters was increased and the size of the bomber formations was reduced. The covering fighter screen flew at very great heights. Enemy bomber formations were also protected by a box of fighters, some of which flew slightly above to a flank or in rear, others slightly above and ahead, and yet others weaving in and out between the sub-formations of the bombers. This type of formation succeeded on several occasions in breaking through the forward screens of our fighter forces by sheer weight of numbers and in attaining their objectives even after numerous casualties had been inflicted. As indicated on the left-hand page the totals of *known* losses (apart from a great number of probables) inflicted on the enemy during the three Phases of the Battle of Britain, are as follows—

Phase I.—	697	aircraft.
Phase II.—	562	,,
Phase III.—	883	,,
	2,142	



ONE OF THE THOUSANDS OF INDIVIDUAL DEEDS OF DARING: One may follow in this diagram how a single Hurricane ran into twelve of the enemy: he dived beneath them, shot up one of the rear aircraft, climbed up and rolled over to pick off another two and then escaped from the main enemy force without damage

THE BOMBERS WERE FOUND IN VARIOUS FORMATIONS . . . As the struggle progressed the *Luftwaffe* twisted and turned in an endeavour to beat the fighters of the R.A.F.

On right—

Occasionally in the confused and struggling fight between the British R.A.F. and the German *Luftwaffe* the British squadrons found themselves temporarily outnumbering the enemy. Thus at 12.15 on "The Greatest Day"—Sunday, September 15—when 185 German aircraft were shot out of the sky, a mixed force of Hurricanes and Spitfires amounting to the greater part of five squadrons, was over the south of the Thames, somewhere near Hammersmith. Here they encountered an inferior number of the enemy and did terrible execution.

But it was seldom that we had the advantage in numbers. The enemy, however, seemed unable to profit by his numerical superiority. A single Hurricane, for example, encountered twelve yellow-nosed Messerschmitts flying straight at it. The pilot dived under them but swooped upwards and shot down the rear aircraft from directly underneath. As he still had plenty of speed the British pilot half-rolled off the top of his loop and followed the enemy formation which had not apparently perceived the fate of their comrade in the rear rank. The British pilot accordingly destroyed another enemy aircraft from the rear and damaged a second before the Germans were aware of what was happening, and he was forced, being still in the numerical inferiority of 9 to 1, to break off the action.

Here are some descriptions of the various formations adopted at different times by the *Luftwaffe*—there have been "formations of from twenty to forty bombers with an equal number of fighters in close escort, with additional protection being given by large formations of other fighters flying at a much higher altitude. Most of the German aircraft came over at heights above 15,000 ft. in sunny skies which made the task of the Observer Corps very difficult. . . ." "As Autumn came on and the sky grew more cloudy, the enemy began to make increasing use of fighters flying very high above the clouds. His most usual practice was to put a very high screen of these fighters over Kent from 15 minutes to three-quarters of an hour before his bombers appeared. . . .". "In the early stages (after the great defeats of September-October) he reduced the size of his formations and used flights of from two to nine aircraft. . . ." On September 15, 1940—"The Greatest Day"—the Germans "were found to be flying in various types of formations. The bombers were usually some thousands of feet below the fighters but sometimes this position was reversed The bombers flew either in Vees ("V"-shaped formations) of from five to seven aircraft or in lines of five abreast or in a diamond formation. The Me 109s were usually in Vees. One pilot has described the attacking German aircraft as flying in little groups of nine arranged in threes like a sergeant's stripes. . . ." Three of the formations employed by the Germans are illustrated in the drawings above.

LONDON IS AGAIN HEA

St. Paul's Cathedral and Other Well-kn

ST. PAUL'S CATHEDRAL IS AGAIN BOMBED : It suffered a direct hit on the North Transept : The bomb launched on the night of the 16th fell through the saucer dome (which has gone completely) into the inner portico, where it hurled masonry into a pile of broken columns and stonework. Most of the fabric of the Cathedral is unharmed, but the walls of the North Transept are badly pitted : the worst damage is to the glass windows—almost every pane being blown out. The Great Dome and the Whispering Gallery are, however, unaffected

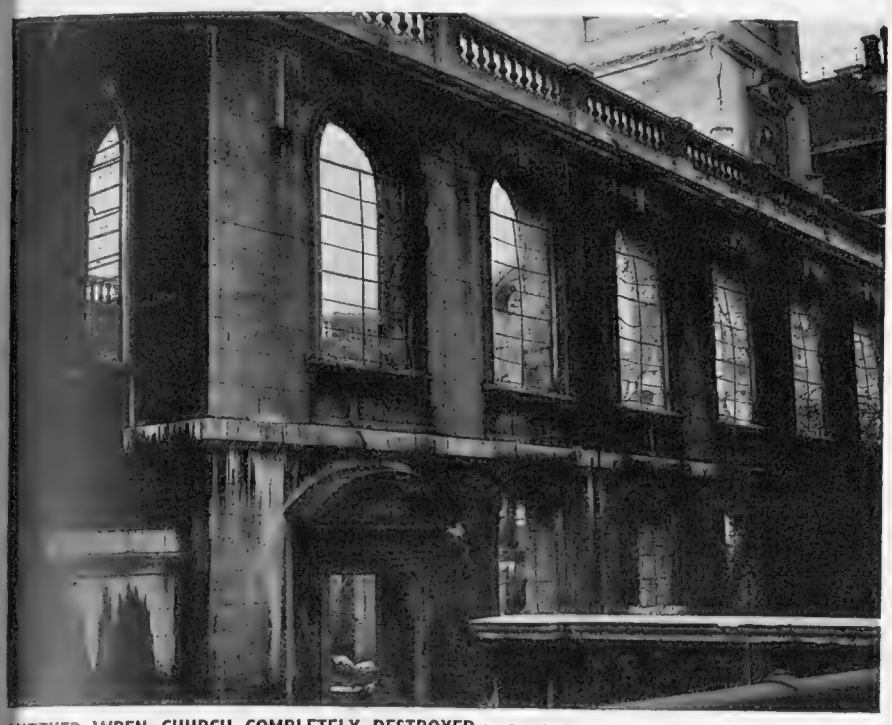
THE ROYAL HOSPITAL AT CHELSEA WAS SEVERELY DAMAGED : This historic and picturesque institution, which goes back to the days of the Stuarts, was particularly unfortunate. The oldest inmate, an old soldier of 101, was killed in the Infirmary ; and amongst the others killed in the raid were eight pensioners, four women nurses and one male nurse. The structure itself suffered very severe damage, as this picture (showing only part of the building) demonstrates. Chelsea Pensioners are, however, still walking about London, undaunted and unafraid

ALL THAT REMAINS OF THE CITY TEMPLE : Headquarters of th Congregational Church and famed through its associations with Dr. R. J. Campbell, Dr. Norwood and others, the City Temple has been burne out. The famous pulpit, the organ and the pictures have all gone

A CAMERA RECORD OF THE BURNING OF LONDON : The de columns of smoke rising from the scores of fires wh the raid was at its height on April 16

LY ATTACKED BY THE GERMANS

ondon Churches and Hospitals are Again Hit by the Bombs



ANOTHER WREN CHURCH COMPLETELY DESTROYED: St. Andrew's Church in Holborn adjoins the City Temple. It was built by Wren in 1686 on the site of an earlier church, the tower of which he retained. It has been almost completely destroyed

A CR PLED HEAP OF RUBBLE IS ALL THAT REMAINS OF CHELSEA OLD CHURCH: in the fourteenth century, and containing the tomb of Sir Thomas More, Chelsea Old Church the scene of a number of fashionable marriages during recent years. To-day it is a mass of ruins: five fire-watchers were killed when it was hit

RESCUING SURVIVORS FROM A BLOCK OF FLATS IN SOUTH LONDON: As on previous occasions the work of the Fire Services and A.R.P. organisations was superb. Wherever there was a chance of rescuing entombed people, excavation work was immediately organised, and the work was carried on despite the flames and the rain of high-explosive bombs

A PART OF GUY'S HOSPITAL STILL BLAZING: The oak-panelled Courtroom of Guy's, dating back to about 1759, with its panelled ceiling, was among the rooms in a wing of the Hospital destroyed by fire. Many other Hospitals were also hit during the same raid

ANOTHER HOSPITAL WRECKED: THE RUINED CHAPEL OF THE LONDON CHEST HOSPITAL: Officials say that this Hospital in Victoria Park, in East London, exhibits the worst damage for a one-night attack. The Chapel bore the brunt of the attack and was destroyed—but there was no loss of life

AND STILL LONDON CARRIES ON: Even during the progress of the raid, Londoners were hard at work salvaging what they could of their property. Here a group of citizens are gathering the remaining belongings even whilst the Nazi bombers still circle overhead and dropping incendiaries and high explosives

BACK IN LONDON: Mr. Noel Coward, who left this country some time ago on a "special mission, which caused considerable speculation," has now returned to London. During his trip he visited Australia, Japan and America. He is here seen leaving his London hotel

The World of Books—By Vernon Fane

The LIVES of MEN in the PUBLIC EYE

A Biography of Lord Halifax; The Story of the Sassoons; Dr. Rauschning's Counter-Nazi Philosophy

AS long as there are famous men, people will want to know about them, and to read about them. So wrote the author of the recently-published biography of such a man. Modern publicity methods and the development of newspapers and magazines into gossip sheets provide daily evidence of the truth of this assertion. Hence the appearance from time to time of what I might call interim biographies: books about living men, having a biographical form.

Mr. Stuart Hodgson's **LORD HALIFAX** (Christophers. 10s. 6d. net) steers a good-humoured and interesting course past many obstacles, and brings his subject safely through in terms of the book's sub-title, "An Appreciation." Mr. Hodgson accepts his limitations almost genially, and makes no attempt at character drawing or at any kind of high-lighting *vis-à-vis* his subject's contemporaries.

Lord Halifax is a type of statesman who, alas, seems fast to be disappearing from public life. Like one of his most famous predecessors at the Foreign Office, Lord Grey, he seems to have entered politics almost against his will. Some readers may almost be astonished to be reminded that this Yorkshire M.F.H., who is also Chancellor of Oxford University, and was until recently Foreign Secretary, and is now his Majesty's Ambassador to the United States, has also been Secretary of State for War, Minister for Agriculture, and twice Minister of Education. This book reminds us that Edward Wood was a Fellow of All Souls', served for three years in the last war with the Yorkshire Dragoons, and at the end of it published, in collaboration with Lord Lloyd, a book on reconstruction, under the title of *The Great Opportunity*. Few will forget that as Lord Irwin he was Viceroy of India in perhaps one of the most difficult periods which any holder of that office has ever been called upon to face.

There have been many critics of Lord Halifax's foreign policy, both before, during and after Munich, but it is significant to note that after sharing with Mr. Neville Chamberlain full responsibility for policy before and after the outbreak of war, Mr. Churchill, whose views and policy were not necessarily those of his predecessor, kept Lord Halifax in the same office he held in the previous administration. Critics he has had in plenty, but no one has ever questioned his unflinching integrity.

When, in November 1937, he went to Berlin ostensibly to attend a hunting exhibition, the Germans made a great play of the visit. They called him "Lord Tally-Ho," the German equivalent for the English hunting cry being *Hallali*, which was near enough to Halifax for punning purposes. It was during this visit that he had the famous hour-and-a-half interview with Hitler at Berchtesgaden.

From this book emerges a very likeable portrait of an intensely English Englishman, a man of high principles wedded to shrewd practice, having a dry humour and given to laconic utterances. If he has a fault as a diplomat, it is, as Mr. Hodgson himself admits, that his determination to see some good in the other man may lead him to a dangerous point of credulity.

The power of riches is a perennial fascination in the study of human relationships, and the tracing of big family fortunes back to picturesque beginnings is as good a subject as any other for a book. In this respect the Rothschild family have in recent years been well documented. And now Mr. Cecil Roth comes along to do the same for the Sassoons.

THE SASSOON DYNASTY (Robert Hale. 12s. 6d.) has a natural corollary with those works on the Rothschilds with which we have been made familiar.

"It is usual," says Mr. Roth, "to refer to the Sassoons as the Rothschilds of the East. They were nothing of the kind. In the first place, the Rothschilds were essentially financiers, whereas the Sassoons were essentially merchants, with subsidiary interests as manufacturers." He goes on to point out that whereas the Rothschild family never lost its unity, the Sassoons, "untidily scattered about the Levant," did.

It all began with David Sassoon, who was born in Bagdad in 1792, and who succeeded to what was in that city the almost fabulous title of the Pasha's Treasurer, known to the Jews in Bagdad as "Nasi," a Prince of the Captivity, descended from Jehoiachin, the exiled King of Judea, and through him to King David.

Not this impressive ancestry alone could have founded the fortune which David Sassoon carved out of the vast development of trade in India which had its beginnings in his settlement in Bombay and ultimately spread from the Malay Peninsula to Shanghai. The sons of this man, "most of whom never knew the discomforts of Occidental dress until they arrived at manhood, later cut a figure in London society and were among the most prominent personalities in the Royal Enclosure that rotated about King Edward VII. The next generation entered Parliament and intermarried with the nobility. The next flaunts the most English of contemporary English poets, the most civilised of Commissioners of Public Works, and a steeplechase rider whose death was considered an irreparable loss to English sport."

Whatever they may have lacked in unity, the Sassoons, in their succeeding generations, seem to have made up for in versatility. The steeplechase rider, "the most English of contemporary English poets," and that perfect specimen of dilettantism, Sir Philip Sassoon, are remarkable examples. If Mr. Roth devotes more space and attention to the latter than the two former, it is perhaps natural in a record in which the power of riches predominates. His character sketch of Sir Philip Sassoon is not without its astringent merits. (On a small point, Lympne is *not* "on the border of Kent and Sussex.")

1,000 TONS COME CRASHING DOWN: The scene as the North Tower of the Crystal Palace fell to the ground after it had been dynamited by experts who came from Scotland to prepare for the explosion. 220 lbs. of gelatine dynamite was used, and within five seconds of the blast the tower had fallen. 840 tons of scrap metal will be available for the melting-pot

Mr. Roth inscribes his book to Adolf Hitler, as an object lesson on the nonsense of "race apartness," which is the basis of the Nuremberg Laws. It is a pretty thrust.

Dr. Hermann Rauschning, whose *Germany's Revolution and Destruction* cast the shadow of coming events before the outbreak of the war, once again assumes the mantle of political philosopher in **THE BEAST FROM THE ABYSS** (Heinemann. 8s. 6d.). He begins it in diary form with some "thoughts in the battle of London," which are continued sporadically throughout the book. These entries are neither remarkable for their prescience, for their descriptive clarity, nor for the communication of information not previously made public. They throw, however, an interesting light on the character of the author, who is, after all, a pure-blooded Prussian, albeit he happens to be in spiritual and political conflict with the chosen leader of his people. It is important to remember that Dr. Rauschning was once a Nazi and a colleague of Hitler's, and was President of the Danzig Senate, under that régime. Better than most men, he is able to interpret the Nazi philosophy, to underline certain developments of Hitler's policy and to point to its ultimate goal.

He can draw inferences from Hitler's checks and the defeat of his plans by the determination of the peoples of the British Empire, and of the heroic resistance of those who live in this island. Dr. Rauschning's closely-reasoned arguments are not always easy to follow, and while he may not shed too clear a light on what we are fighting for, it is pretty clear from his experience, and from his arguments, what we are fighting against.

THE MYSTERY OF THE ONE-SIDED CASTLE: A curious old ruin, resembling an old keep, probably of Norman origin, but which has no depth and no trace of the three other sides, stands between the manors of Belchaump and Gestingthorpe, in Essex. Legends have grown up around this relic of ages past, but no one can explain the complete absence of the other sides to this one-sided castle

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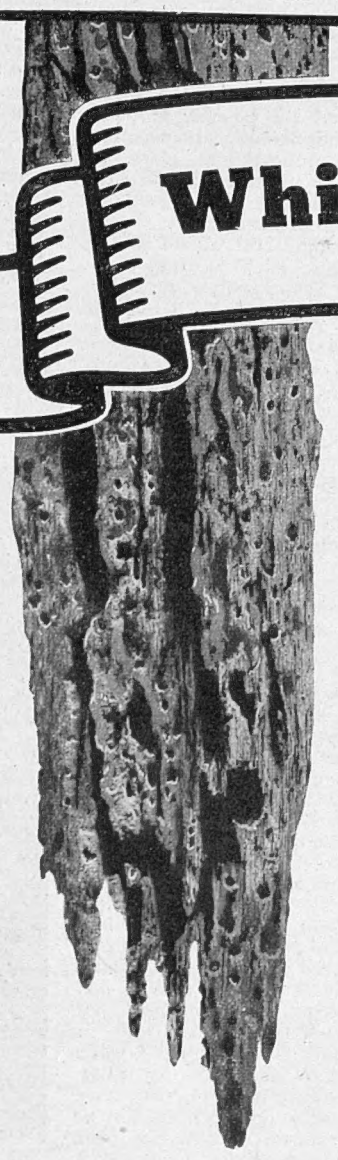

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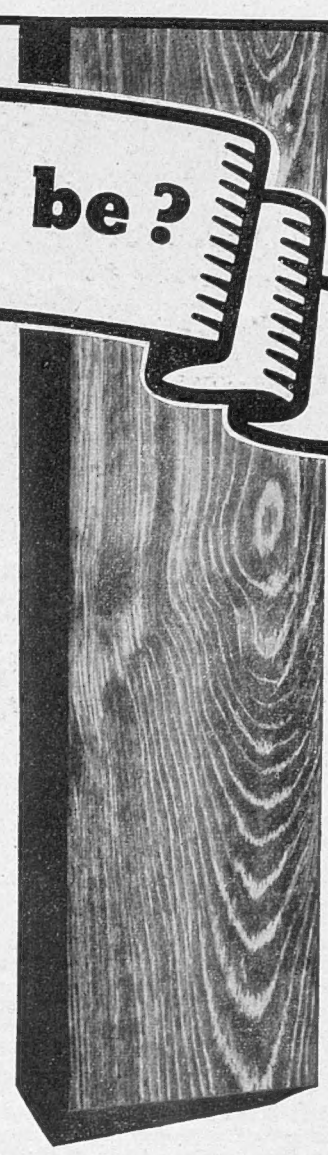

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THE D'OYLY CARTE OPERA COMPANY IN THE PROVINCES : A picture taken during the actual performance at the Alhambra Theatre, Bradford, of *The Gondoliers*. The scene above is in Act II. In front, from left to right, are seen : Marco (Ben Williams), Gianetta (Helen Roberts), Jessa (Marjorie Eyre), and Giuseppe (Leslie Rands)

THE THEATRE IN WARTIME

The Festival at Stratford-on-Avon and a Brief Review of London's Shows. By PHILIP PAGE

IT has been remarked that if William Shakespeare could have attended his own Festival last week, Stratford-on-Avon under a black-out would have surprised him. It would not. There are many things about wartime Stratford which would have caused him surprise (among them, I think, certain features of a performance of *Twelfth Night* which I saw at the new Memorial Theatre), but certainly not the black-out. The old city is now lighted o' nights much as it was in Shakespeare's time—that is to say, not at all, except by the same old moon, which had thoughtfully consented to accompany the opening performances. But Ann Hathaway would not have been heavily fined, as was a local friend of mine, had she left in her cottage garden a bonfire burning after dusk.

By far the best features of *Twelfth Night* I thought the Malvolio of Mr. Baliol Holloway and the Toby Belch of Mr. Jay Laurier. Mr. Holloway was pompously absurd without overdoing the clowning or overlooking the essential necessity of the character. Mr. Laurier, whom many of us remember as a music-hall comedian, and a first-class one, too, is now probably the best of our Shakespearean clowns. He is ripe, robust and gloriously English. Mr. Andrew Leigh's Sir Andrew Aguecheek was a good foil to him. Miss Margaretta Scott's Viola—charming both to see and to hear—brought back pleasant memories of her Shakespearean performances in Regent's Park. Is, by the way, that Open Air Theatre to function again this summer ?

I was glad to find this and other productions being well supported, and by, I was informed, a public which is for the most part a new one. Stratford and the neighbourhood now have a large and special wartime population who are eager for any diversion, and have thus been, as it were, bombed into Shakespeare.

The theatre in London is in an altogether more healthy and vigorous state than it was a couple of months ago. In fact, conditions were rapidly approaching something like normal (or as near as we can hope to approach it in wartime) when the disaster to the Café de Paris set things back a bit and caused more than one important production to be postponed. However, as the days grow longer the 5.30 performances are more and more in demand. Revue is doing particularly well, in spite of the short life of an expensive spectacular show at the Coliseum. Mr. George Black's large and loud *Applesauce !*, with Mr. Max Miller and Miss Florence Desmond as its chief " stars," which was originally seen at the Holborn Empire, is drawing crowds, mostly uniformed, to the Palladium, and before these lines appear another George Black revue, *Black Vanities*, which had a trial trip at Brighton, in spite of the ban, will have been produced at the Victoria Palace.

The best of the new revues I consider *Orchids and Onions*, at the Comedy ; a second visit confirmed that impression. Miss Polly Ward, the leading lady, is delightful to look at and really clever, and it is good to welcome back Mr. Albert Whelan, familiar waltz-whistling and all. He also puts in good work as a character actor in sketches, some of which did not go too happily at the first performance but have now been vastly improved. There is an amusing ballet—consciously amusing, that is to say. I am so weary of highbrow ballets and of ballet dancers who take themselves far too seriously.

" *Women Aren't Angels*," one of the most diverting farces in the long history of the Alfred Drayton-Robertson Hare combination, had settled down into a pleasant success last September, when it vanished suddenly, for unpleasant reasons upon which it is not necessary to dwell. It has now returned to the Strand Theatre, where it is enjoying equal success, which will be spared, let us hope, a similar *dénouement*. What this piece of glorious nonsense is about, except clothes and the interchange of them, it is not easy to say (and quite unnecessary). Mr. Robertson Hare is too good an artist to be described as what is known in the profession as a " prop comedian." Yet I do not remember seeing him in a play in which " props "—in his case, clothes and their removal—have not played a vitally important part. Here it is the kilt, which slips, or is torn from him at regular intervals. Mr. Drayton, too, appears in a variety of costumes, always with funny effect. Even Miss Judy Kelly loses her pink pyjamas, but not *coram populo*.

THE CACHUCHA DANCE : This fast and colourful dance takes place in the last Palace scene of *The Gondoliers*. This picture was also taken during one of the actual performances at the Alhambra Theatre, Bradford

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In Quest of Good Hotels

By ASHLEY COURTENAY

HOTEL keepers are becoming increasingly alive to the fact that it is not good business to keep a house entirely full of "permanents," nor is it good for "permanents" that they should not have fresh blood infused into their midst.

Those who live in hotels—a very big population since the war began—tire of witnessing the habits and idiosyncrasies of their neighbours. They soon exhaust all their small talk and their confidences. And they are tired of Mr. A and his reminiscences, and Mrs. B's voice. And we who frequent hotels monopolised by "permanents" hate to be frowned on by the "oldest resident" when we usurp his favourite chair or upset unconsciously his little daily habits. So a decision made by an increasing number of hotel keepers to keep a room or rooms for those on leave, or for other wayfarers, will meet with universal approbation.

Even if it means—as it 's likely to—an occasional bedroom lying idle and subsequent loss of revenue, the hotel keeper will be the gainer in the long run, for new blood breeds goodwill. Certainly goodwill decreases once hotel visitors have arrived at that permanent stage when they feel they could run the hotel better themselves. It 's to my mind an unhealthy sign when hotel keepers tell me they are full up "for the duration." Such hotels, like stagnant pools, breed "mosquitoes."

But I would like the hotel keepers' decision taken one step further and suggest to hotel residents who have been fixed in one place since the beginning of the war that it is time they made a change, however comfortable they may be, for it 's only by moving on that minds can be exercised, memories added to, and wartime meals take on a new attraction. Then how much nicer it will be when they come to return to the hotel which has become their wartime home.

So let us indulge this week in that child-like game of "general post," and here is my first call. South Devon to Shropshire. The green countryside in exchange for blue seas. Red sandstone in place of red cliff. Black-and-white timbered houses in contrast to thatch. The smells of the farmyard in place of the seashore. Shropshire is not a county that at the moment I know a great deal about, but I intend to linger there shortly, though I shall rule out Shrewsbury for it is full . . . if not over-full.

But 11 miles north of Shrewsbury, with Wem and Market Drayton as its nearest towns, lies Hawkstone Park Hotel, where I have happy memories of a night spent some few months ago.

It must be the golfers' conception of heaven, for there is a first-class eighteen-hole golf course right outside the front door.

There is a lake, too, for fishermen. Rough shooting for anyone who likes pottering about with a gun. And it is a perfect spot when children's summer holidays come along, for it is singularly free from traffic dangers; and what times the growing young man can have rabbiting!

Another place I have down in my note-book is Church Stretton, which has Swiss-like charm. Nestling in the village (or is it a town!) is an hotel with the unusual title of *The* Hotel. What a lot it has to live up to with such a name, for many of us have been looking for The Hotel for many a long day. May it come up to my expectations when I shortly hope to visit it.

Another hotel on my visiting list of which I have had good reports is Hightree Country House Hotel at Leintwardine, near Bucknell. I am told that the hotel stands high above the village of Leintwardine, and there are superb views. It 's quite a small place with five single bedrooms and five double, and the food, cooking and housekeeping all come under the personal sphere of the proprietress. With Ludlow 8 miles, Ledbury 12, and Shrewsbury and Hereford 30 and 25 miles distant, it should prove to be an excellent centre historically and scenically.

I have been told, too, of a well-run Guest House in or near Bridgnorth, but the lady who wrote to me about it had such illegible handwriting that I am still endeavouring to decipher its name. Perhaps this may catch her eye. Certainly Bridgnorth is a place I should like to stop at, for it is curiously situated, with one part of the town high up on the top of a cliff and the other down by the river bank.

For those who like quite tiny Inns there are a number in Shropshire under the auspices of the P.R.H.A. I like the sound of the Boyne Arms, at Burwarton, which is finely situated on the side of Brown Clee Hill (1,806 ft. high), and on the old road between Ludlow and Bridgnorth. It 's in the heart of the country mentioned by A. E. Housman in *A Shropshire Lad and Fancies Knell*. Another little Inn in a district which is much recommended by Doctors as a health resort is the Howard Arms at Ditton Priors. Then I read of the Wingfield Arms at Monford Bridge which lies alongside the River Severn where for 1s. a day you can get excellent fishing. But one of the nicest of the small hotels of Shropshire which must certainly be revisited, even if Shrewsbury is full, is the Mytton and Mermaid at Atcham, 4 miles outside Shrewsbury on the Holyhead road.

When planning a visit to any county I always look up what Trust Houses have to offer, and as regards Shropshire there are singularly few, the Lion at Shrewsbury and the Wynnstay at Oswestry. But most certainly shall I step over the border into Radnorshire so that I can visit the Radnorshire Arms at Presteign. It 's one of the most attractive of the Trust House Group, as the house is architecturally picturesque and rich in tradition. Though it carries the date 1616, part is much older. It 's full of Jacobean panelling, old beams, and many of the charming rooms are wainscoted in oak from floor to ceiling. Of this hotel there are many oft-told tales of secret panels and hiding places.

General Post! Perhaps I was wrong in mentioning Shropshire, for you may yet get there before I do.

Mr. Ashley Courtenay is always pleased to advise "Sphere" readers of hotels, both large and small, known to him personally. Letters, accompanied by a 2½d. stamp for reply, should be addressed to him, c/o the Editor, THE SPHERE, *Commonwealth House, 1, New Oxford Street, London, W.C.1. Personal and telephone inquiries, however, cannot be accepted.*

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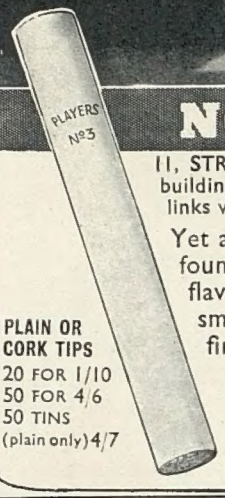

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